

Global Virtual Teams

Dynamics of Leadership, Trust, Communication, and Culture

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<p>Abstract</p> <p>We live in an era of digitalization, where everything is connected, and access to the internet is available to nearly 4 billion people worldwide. As technology and infrastructure continue to advance at a very fast pace, it becomes increasingly easier to collaborate with people across thousands of miles, in real time. Collaborating with people from various countries and regions of the world is a phenomenon that has become the new normal in business and academic environments. These so-called Global Virtual Teams (GVTs) and the dynamics that they face based on the dimensions of leadership, trust, communication and culture were the focus of this study.</p> <p>The aim of this research was exploratory and qualitative, and it followed the principles of a case study and it was conducted by using semi-structured interviews with ten IBM employees from eight countries. In addition to interviews, the author could rely on over 11 years of experience in GVTs and access to internal training and education documentation.</p> <p>Based on the analysis of the interviews, GVTs deserve special attention by leaders and team members, as the adoption of this operating model will continue expanding. Specific skills are needed when leading and developing trustful relationships as well as when communicating and dealing with different cultures. Being virtual means very different dynamics, challenges and opportunities than those known by collocated teams.</p> <p>This research brings insight and managerial recommendations related to the ways to leverage such opportunities and mitigate the challenges, along with an overall skill set approach to leading and working virtually across borders and cultures. These suggestions can benefit both new and existing teams, which are either global and virtual or aiming to become so.</p>		
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1 Introduction

The focus of this research is a phenomenon known as Global Virtual Teams (GVT). Business and academic organizations have been taking advantage of advances in technology and the availability of high-quality and high-speed internet connections (hitting millions of offices and homes around the world). This has decreased their own infrastructure needs and at the same time given them a quicker access to expertise, which is a few clicks away. Global Virtual Teams require leadership, high levels of trust and communication as well as multicultural understanding. This is what this study discusses in the next pages.

1.1 Background

Online working is a statement that many people readily identify themselves with nowadays. From merely being connected to the World Wide Web to look for solutions to issues that one is having at work to collaborating with colleagues in different offices that are often located in various countries, the advances in technology and telecommunications have allowed the creation of the phenomenon known as Global Virtual Teams. Despite the efforts of companies, such as Yahoo!, whose CEO banned remote working (Goudreau 2013), and even that of IBM in a more recent attempt at eliminating remote work, there is no turning back in how companies have their offices virtually connected and how projects are quickly able to leverage skills not readily available in their domestic locations. The traditional sense of an office will be a thing of the past (Branson 2014, via Twitter).

To review this trend even further, remote working is no longer an exclusive benefit of developed countries or those that possess faster internet connections. As reported by the Brazilian news company, Globo (2016), the Brazilian Institute of Public Opinion and Statistics, or IBOPE, conducted research on 2000 workers across the country.

According to the results, 42% of the interviewees could choose their workplace, which meant that they were not obligated to work from a specific office space anymore, thus leading to an increase in the virtual workforce. This comes from employees seeking to avoid long commutes, reaching a better work-life balance or simply achieving higher productivity by working without physical interruptions.

This is a phenomenon that cannot be reversed. On the contrary, it is evermore being adopted by different professions and regions of the world, as technology and work laws allow. This trend supports the decentralization of overpopulated cities and helps to generate income in areas other than the already developed capitals and megacities. Still, in the same Brazilian article, it was stated that 70% of the interviewees wanted more flexibility in how work is performed. Putting this in the context of a conservative country, such as Brazil, the global effects can be rather exponential.

Technology, again, is a major player in allowing for such changes to happen at an increased pace. Tele and video conferencing are a necessity to today's world, but this was not true a few years ago. There is an increased number of virtual office tools that can be accessed via a computer or mobile phone from virtually anywhere in the world, as such systems are in the "cloud," which is just another word for being hosted virtually and available via the internet (NJIT 2015). Looking ahead, we have other possibilities for creating interactions between distant persons. These possibilities are provided by applications such as Hologram by Microsoft (I3D 2016) or Bridge by Occipital (Kelion 2017) that was first presented at CES 2017 in Las Vegas. Both devices explore the concept of virtual and augmented reality and give society a way of being completely, yet virtually, visible to someone else at the other side of the world, in three dimensions and real-size.

If Global Virtual Teams exist today due to technological advances made over a decade ago, such teams will only continue growing with the speed of today's advances. However, Global Virtual Teams face challenges, such as communication and trust between the team members, especially as it is frequent and common to have such teams formed of people from several countries, educational, political and religious backgrounds and many unrelated languages. Such teams are commonly described as multicultural teams. As culture in this context has not been deeply investigated (Hinds et al. 2011, 140), a section of this thesis is devoted to this theme, along with a portion of the empirical research. Finally, the combination of future growth and the dynamics of the Global Virtual Teams were what drove this study.

1.2 Motivation for the research

My experience of working with Global Virtual Teams in a large multinational American company (IBM) since 2006 motivated this research. I worked at IBM Brazil until 2015, which offered a great deal of experience in and observations on GVTs. Since 2015, I have been employed by IBM Finland, which has provided me with a completely new set of experiences and a refreshed point of view.

A typical day for me in Brazil, as a leader or member of a Global Virtual Team, involved having conference calls very early in the mornings to accommodate participants from China and Japan, for example. When working from Finland, the situation was reversed, as then I would usually be having virtual meetings with colleagues from the US at 9 or 10 pm. In addition to the time zones, communication is something with which I have had to work harder to ensure the messages would be delivered clearly. I speak English with my Finnish and American colleagues, Spanish with the Mexican team and Portuguese with my Brazilian counterparts. Even though the company's business language is English, being able to communicate in a local

language brings certain advantages to understanding even if translating certain words and expressions is not always possible.

When working on new projects with new team members, I have also faced the challenge of creating rapport and trust. I have discovered through experience that it takes involvement and personal interest to go past the initial stages of team development, which is covered in the literature review. Only after a certain level of rapport has been established with colleagues, the levels of productivity start to increase, and this daily context has not been something unique happening to me, it occurs across the entire company and similar organizations, as well.

On a personal level, researching further into this theme not only uncovers knowledge from other research but at the same time allows me to present my point of view and experience in how I have planned and executed this study. Without the experience acquired over the years, this research would be solely theoretical. However, now it contains references that I could only think of based on my long-time involvement with such teams.

In addition to its relevance to myself and the business world, there has been increased academic research on Global Virtual Teams, and technological and empirical advances happen at a faster rate than research can follow. As pointed out by Saarinen (2016) in her doctoral dissertation, there is still a significant gap to be closed in this area of research, and this thesis aims to decrease one part of such a gap.

1.3 Research questions

According to Gil (2002, 21), a research project must start with the definition of the research problem and question. Based on a previous literature review, and the

author's observation of the nature of the Global Virtual Teams, the need for carrying out further investigation into this field came alive.

With that expectation defined, the objective of this research was to find answers to the following research questions, which firstly addressed the different dynamics introduced by the teams being global and virtual, and taking leadership, trust, communication and culture as the main constructs. Secondly, the aim was to identify challenges and opportunities. The questions are presented below:

- What are the dynamics of leadership, trust, communication, and culture in the Global Virtual Teams (GVTs)?
 - How can GVTs overcome the challenges of multicultural diversity and team virtuality?
 - How can GVTs leverage the strengths of multicultural diversity and team virtuality?

Qualitative research was chosen as the method for this study, which as described by Gil (2008, 27) and Eriksson and Kovalainen (2008, 77), enables the researcher to explore the topic further and more broadly, bringing the understanding of possible answers to the research problems. The primary tool for data collection was semi-structured interviews with five leaders and five team members working for Global Virtual Teams in various IBM locations across the globe. The idea was to have at least one representative of each continent for a broader cultural coverage. Semi-structured interviews (O'Gorman 2014, 119) are more labor intensive, as they require upfront work to prepare the questions and the possible paths that the conversation may follow. In contrast with unstructured interviews, carried out mostly with leading questions, there is less chance of the author's bias being part of the content, as in semi-structured interviews the list of questions is available beforehand and shared with the interviewees.

The approach to the interview follows asking the interviewees questions from five main categories, along with focused sub-questions. These questions, along with the criteria for the selection of the interviewees, are further explained in Chapter 3.

1.4 Structure of the thesis

This thesis is comprised of six main chapters:

Introduction, which this subchapter is a part of, along with the background of the problem and research development; The motivation for the research, from the personal, professional and academic points of view; The research questions, which guided the entire research process and literature review; and this subchapter, which describes the structure of the thesis.

Key concepts, literature review and theoretical framework are part of the second chapter describing what global virtual teams are, telling more about technology and future trends and giving a more in-depth analysis of virtual leadership, trust and communication within virtual teams. The second chapter also includes references to Tuckman's team development stages. Following that, multiculturalism is explored and discussed from the perspective of teams. To conclude the chapter, a theoretical framework is presented, which uses the previous concepts as a base for the empirical research.

Methodology is where the process followed to develop this research is detailed and explored, along with references to explain the reasoning behind the different choices.

Results are under the fourth chapter, in which the author presents the findings from the empirical research process, including quotes from the interviews that were carried out with experienced professionals working for GVTs.

Discussion, as the fifth and last chapter, brings everything together and provides a summary of the findings, answers to the research questions as well as presents managerial implications and a comparison to the reviewed literature. It also points out the limitations of this study and gives suggestions for additional future research.

2 Literature review: Global Virtual Teams, Virtual Leadership, Trust, Communication, and Culture

This chapter reviews the different concepts discussed in the body of this thesis and describes how the ideas are linked through a theoretical framework. International academic articles were reviewed for the following two central themes: virtuality of global teams and cultural diversity in teams, also referred to as multiculturalism.

Within the teams, three significant sub-themes were reviewed: virtual leadership, trust and stages of team development and communication. These themes helped to clarify the research problem and drove the data collection and analysis process as the theoretical basis for the research.

As identified in international articles in the previous years (Yu 2015, 75; McShane & Glinow 2014, 223; Ebrahim 2009, 2664; Zakaria 2004, 15), there is a need for further research on this area to add to the existing knowledge base and consider different points of view. Hinds, Liu and Lyon (2011, 139) explicitly call for more field research around global collaborations. Moreover, by reviewing the dynamics of these themes, the author sought to bring more clarity to how Global Virtual Teams (GVTs) and the dynamics of leadership, trust, communication and culture work.

2.1 What are Global Virtual Teams?

Due to enhanced infrastructure and technology across the globe (Saarinen 2016), it has been easier to connect with colleagues that are living in various countries. This

has granted companies an option to cut costs by allocating resources, for example, to developing countries, which is also commonly referred to as offshore allocating. On the other hand, it presents the workforce with the need for understanding other cultures as a team formed of North and South Americans may not bond quickly, particularly if not managed well.

As presented by The Economist (2015), the adoption of virtual offices is growing very fast. Federal Government units seem to be the ones who have taken the greatest advantage and built over 400% between 2005 and 2012. Based on the same research, it is possible to infer a rising percentage of employees doing, at least, some form of remote or virtual work. In the US alone, 25% of the workers that were interviewed reported that they expected that their companies would be entirely virtual in the next three years. The same was suggested by Dakrory and Abdou already in 2009, meaning that Global Virtual Teams would remain on the rise for the years to come. A recent study corroborates the fact that GVTs have become the "new normal" due to advances in technology (Derven 2016; Saarinen 2016). With their expansion, GVTs bring many advantages to companies, while a weak implementation can lead to failures faster.

To best describe the concept, it is also essential to clarify the definition of a team, which according to Katzenbach and Smith (1993, 45) and Jain (2009) is a set of people who have complementary skills to each other, aiming to achieve a common goal and purpose. Global Virtual Teams, or GVTs, are groups of people who are geographically and temporally dispersed. Moreover, they are made of culturally diverse team members, reliant on information and communication technology to achieve project goals within an organization together (Jarvenpaa & Leidner 1999, 792; Powell et al. 2004). Virtual teams work independently and across boundaries of time, space and organizational structures with different ethnic, educational and functional backgrounds, and often with no opportunity to ever meet face-to-face

(Kirkman et al. 2002; Kotlarsky & Oshri 2005; Kankanhalli et al. 2006; Cusumano 2008; Reed & Knight 2010).

The definition of Hosseini and Chileshe (2013, 1103) is similar to the ones mentioned above. It adds the element of task completion to it, stating that GVTs are groups of remotely distributed employees, geographically and organizationally, in different time zones, with distinct skill sets as well as heavily dependent on technology and communication tools to perform tasks.

In addition, Corvello and Migliarese (2007) argue that virtual team members may be working together for the first time in a virtual team setting, without having had any previous opportunity to familiarize themselves with their new colleagues. However, given the flexibility of setting up virtual teams, companies are further adopting this methodology of work (Powell et al. 2004) as it can bring monetary savings on infrastructure costs, office environments (Schweitzer & Duxbury 2010) and faster access to a broader pool of resources across the globe (Denisova 2015).

As pointed out by Bejarano (2006, 161), within the virtual environment, teams have minimal physical and personal contact, which introduces a challenge to communication and collaboration. Differently from national virtual teams, which are spread within a single country, global virtual teams may experience additional problems, such as language and cultural barriers, as the team members come from different national backgrounds and practices, whereas virtual teams are located within national boundaries. Even though GVTs may still contain co-located team members, the majority of the interaction is performed outside of the comfort of face-to-face dynamics (Yu 2015).

One definition of culture that helps to give perspective is that of Spencer-Oatey (2000, 4) which states about culture as being “a fuzzy set of attitudes, beliefs, behavioral norms, and values that are shared by a group of people, and that

influence each member's behavior and his/her interpretations of the 'meaning' of other people's behavior". This point of view alone represents a hard level of complexity that is commonly found in companies conducting their business across cultural borders.

The inexistence of facial expressions and body language is yet another critical factor affecting the efficiency of global virtual teams. It affects trust and communication, which are recognized as essential factors to team building and high team performance. Strong virtual leaders are crucial pieces to global virtual teams as they can intermediate and help to guide relationships and deal with the team members separately or as groups when needed (Dragusha 2012).

To conclude this section, the literature identifies through previous points of view plus self-observation that GVTs are teams reliant on technology and advances in infrastructure. Moreover, they are dependent on electronic communication (synchronously or asynchronously) that frequently takes place through a non-native language. They are also culturally rich and diverse, spread across national boundaries and time zones as well as multi-disciplinary and aiming to achieve common goals and purposes.

The next subchapter introduces a review of how leadership, team formation, trust and communication perform a role within GVTs. This concept is presented and clarified from multiple points of view.

2.1.1 Virtual leadership

Also known as e-leadership, virtual leadership has been scarcely reviewed academically as pointed out by Savolainen (2013). By analyzing the existing literature on the topic, it has been possible to define this method of leadership as a social influence practice, enabled by the progress of technology, through which attitudes,

feelings, ideas, organizational and personal behaviors are managed (Avolio et al. 2000; Avolio & Kahai 2003; Zaccaro & Bader 2003; Mackenzie 2010).

Physical interaction in GVTs is not possible for the majority of the time, except for when there are team events where team members unite for a period at a central location around the world. For that, virtual leaders need to focus on leading by example, by influencing, inspiring and motivating. As trust is a delicate matter in the virtual environment, harsher techniques, such as coercion or omission of information are not efficient and must be considered carefully, as their effect could be amplified in these situations (Switzer 2000).

In some studies, virtual leadership can also be referred to a kind of person-less leadership, often time via an avatar or inexistent figure, something to which followers relate to, but is not necessarily a person (Savolainen 2014), and this is not the concept in focus for this review.

A study by O'Hara-Devereaux and Johansen (1994) demonstrated a few key fundamental actions that virtual leaders could take to ensure higher performance, which hold true to date according to the author's observation. They are necessary rules, such as providing a communication flow, being multiculturally fluent, utilizing technology for augmenting the reach of team members, and also building of trust.

Trust is an essential component for all teams, and virtual leaders are responsible for assisting their teams in achieving high levels of trust. The development of trust in virtual teams is not only necessary but essential for the team to move through the stages of team development (Tuckman 1965). To further clarify, the next sub-chapter describes Tuckman's model and next trust is discussed as a vital factor of a team's performance.

2.1.2 Trust in Virtual Teams and Tuckman's team development stages

As highlighted by Dragusha (2012), team leaders possess a big responsibility during the initial stages of any team's formation. That is when issues such as trust can be either supported or undermined. With Tuckman's team development model (1965), it is possible to observe different stages where teams gain more experience of working together, and at the same time how trust can affect the evolution to next stages. Team leaders are involved in all phases and may be able to positively or negatively impact the team's development in both co-located and virtual environments.

Tuckman's model is comprised of five main stages, being the fifth an adjustment to his model, made years later of the publishing of the original model after additional research and discussions were carried out. These stages which are forming, storming, norming, performing, and adjourning, are described as follows, based on the original article by Tuckman (1965).

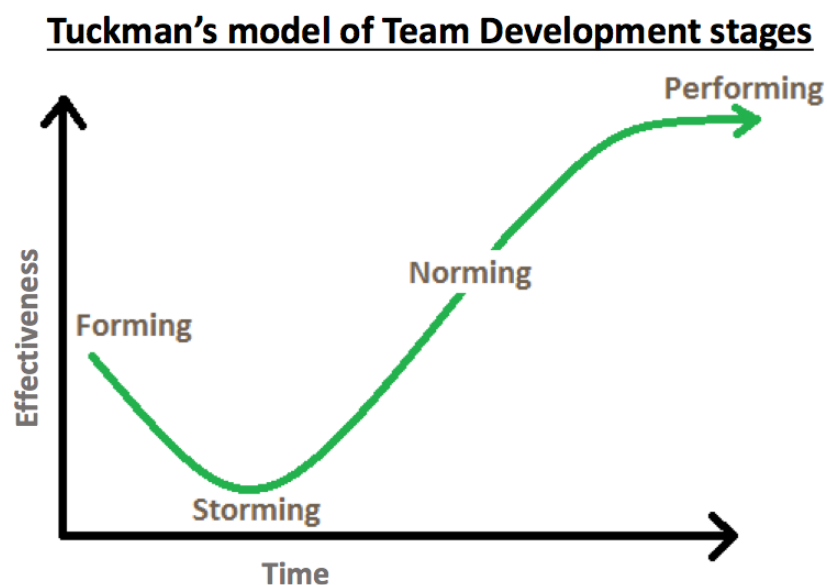


Figure 1. Tuckman's model of Team Development stages

While the original article is much more detailed, the selected parts here are ones the author sees as most relevant to the topic of GVTs:

Forming: This is the initial when a team is brought together for the first time as one unity. While individual team members may already have worked with each other, the concept of a new group means some team members are working together on a project for the first time. The forming stage is full of uncertainty for members, as they are looking to define what roles they will have and what their contribution will be like. As a team, codes of conduct are developed, and team building exercises are executed to remove the feelings of anxiety and to define leadership figures within the group.

While this stage can be completed in a short time-frame, it is where team members start to define what trust looks like in that environment. According to a model of research by Jarvenpaa, Knoll, and Leidner (1998), this phase allows team members to show their abilities, benevolence, and integrity, along with their propensity to trust others, generating the initial dynamics of trust. The model has been reproduced below for additional reference.

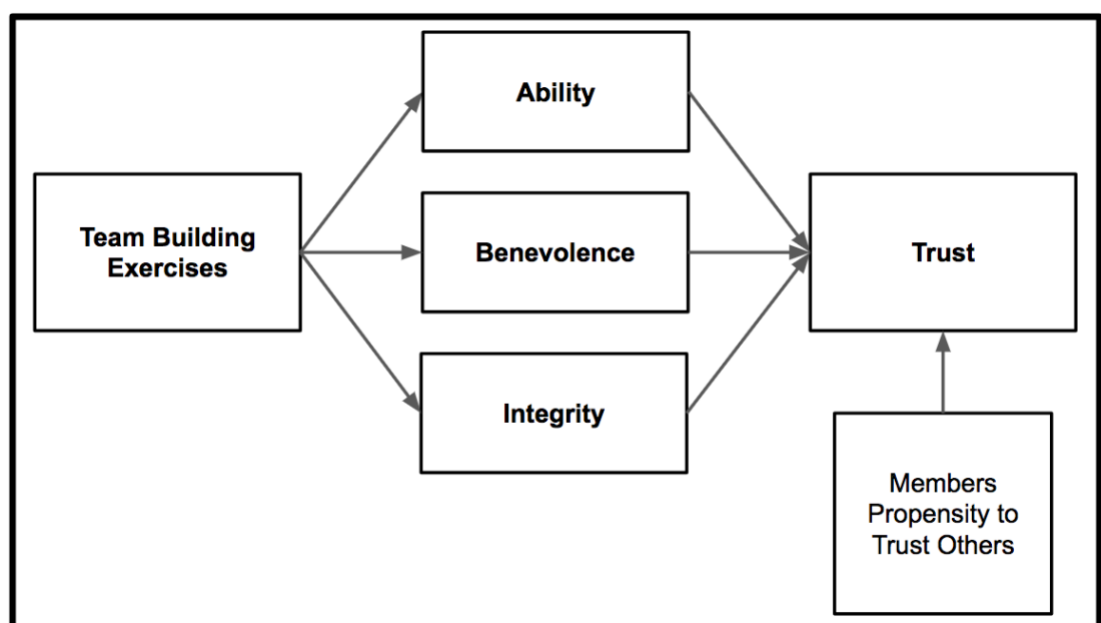


Figure 2. Trust in teams, Research model by Jarvenpaa, Knoll, and Leidner (1998)

Trust is seen as a critical element to Global Virtual Teams, as discussed throughout this study, and it is important to highlight the aspects of the model above which refer to the individuals of a team. Ability is their level of competence to perform required tasks to complete a project or solve problems. Benevolence is the pre-existing and wired willingness to do good to others, regardless of their own goals. And finally Integrity is what makes us stable and whole, it is what makes our values transparent to others and through which we can become a reference and trusted source.

As all of these issues arise, the team moves into the storming phase.

Storming: They are now attempting different approaches, communication styles, schedules, to move to Norming as soon as possible. However, conflicts are frequent and recurring during this stage, which delays the team's ability to achieve the next phase. Common feelings include a rejection of authority and hierarchy, and tasks are no longer followed per instructions, as confusion arises regarding the clarity of the objectives of the project. Again, the role of a team leader is vital during this phase to provide such clarity to team members and continue building up trust.

Norming: Finally, after going through a period of possibly more conflicts and misunderstandings, team members have achieved greater intimacy with each other, which helps to intensify trust, as suggested by the study of Jarvenpaa et al. (1998). It should be noted that this stage should not be one where team members avoid conflict but are able to deal with anything that arises much more quickly and efficiently. Team leaders can regain some of the respect that might have been lost during the storming phase.

Performing: As the team remains within the norming phase, they gain experience and maturity, along with high levels of trust, leading them to become a high-performing team. Team members are energized, motivated and focused on achieving

their objectives. Trust is actively present and issues such as micro-management are counter-productive.

Adjourning: This stage was added later after the four main previous stages were created in 1965 by Tuckman. In essence, it is when the team complete the project, get together to learn from their doings and move on to their next endeavors.

The conclusions of Dakrory and Abdou's research (2009), show that the performing and adjourning stages have a higher emotional impact to the team's development, while the other three stages are more task-oriented and more rational. The important finding is how performance can be affected by trust and teamwork, and vice-versa. Sustaining a high-performing global virtual team requires a strong leadership presence, developing trust and relationship bonds.

It is relevant to highlight that this model has been developed in a time where Global Virtual Teams were not yet possible, however, the concepts are still applicable. As observed by Lipnack and Stamps (1997), virtual teams may face much harder forming and storming phases, as the important factor of live and face-to-face interaction does not exist in a purely virtual environment. However, this limitation forces teams to find other ways to supplement trust building factors, which are initially easier for co-located organizations. In fact, it may shorten the initial two stages, allowing virtual teams to reach higher performance faster.

While trust may be acquired through the navigation of the team development stages, Crisp and Jarvenpaa (2013) discuss the existence of a phenomenon known as Swift Trust. This concept suggests that teams are also able to move straight into the performing stage, as they are not able to spend time with relationship building and forming or norming activities. Especially true to projects of short and temporary duration, swift trust takes early and existing trusting beliefs, which directly and positively impacts team performance. As Global Virtual Team members share little to

no traits when it comes to national culture and background, swift trust may only sustain for a period before eroding and turning into an issue. Teams may need to go back to developing their relationships further at this stage. One way or another, trust is perceived as a critical element to GVTs as outlined by several referenced authors in this chapter and must be observed.

2.1.3 Communication in GVTs

Understanding requires interaction, and a healthy relationship starts with clear and open communication. Expressing one's opinions, thoughts or ideas is not an easy process in face-to-face situations, which means the reduced visual context and provision of visual cues can further affect communication within virtual, and especially global virtual teams (Dragusha 2012).

As noted by Dyer (1995), communication is the route through which collaboration can happen, while developing trust via dialogues. Lipnack and Stamps (1997) state that communication is "a process of developing relationships." At the same time, however, Hightower, Sayeed, and Warkentin (1997) explain that the exchange of information within virtual teams is decreased from a similar face-to-face case, while Duarte and Snyder (2001) verify that virtual communication can be less effective than face-to-face communication. Still, according to Hightower et al. (1997), this may be given since users are less accustomed to using virtual tools to express themselves, and are less inclined to share as deeply as they would when seeing the receiver in front of them.

Technology surely plays a major role within GVTs, as described earlier in its definition: Global Virtual Teams, or GVTs, are groups of people who are geographically, temporally dispersed, made of culturally diverse team members, reliant on information and communication technology to achieve project goals within an organization together (Jarvenpaa & Leidner 1999, 792; Powell et al. 2004).

Culturally speaking, asynchronous communication technologies (such as emails and forum boards) may be able to hide elements of culture that would otherwise be more prominent when real-time discussions arise. As noted by Adler and Gundersen (2007, 70), communication between cultures include sending and receiving both verbal (words and sounds) and nonverbal messages, which contain facial expressions, body movement, tone of voice and physical context.

Communication having no visual cues or different levels of intonation, for example, provide flatter and more straight-forward facts. The difficulty in virtual settings is that not having access to these hidden cues limit the context of the communication, and one individual's culture could create interference in the process of reading such messages (Hinds and Bailey 2003; Kankanhalli et al. 2006).

The following framework developed by Matveev and Nelson (2004) illustrates some of the already discussed aspects of communication within multicultural (or global) teams. It focuses in how the individual culture (inherited from the national culture) influences the ability of understanding other cultures, therefore impacting efficiency of cross-cultural communication, thus leading to low or high-performance teams.

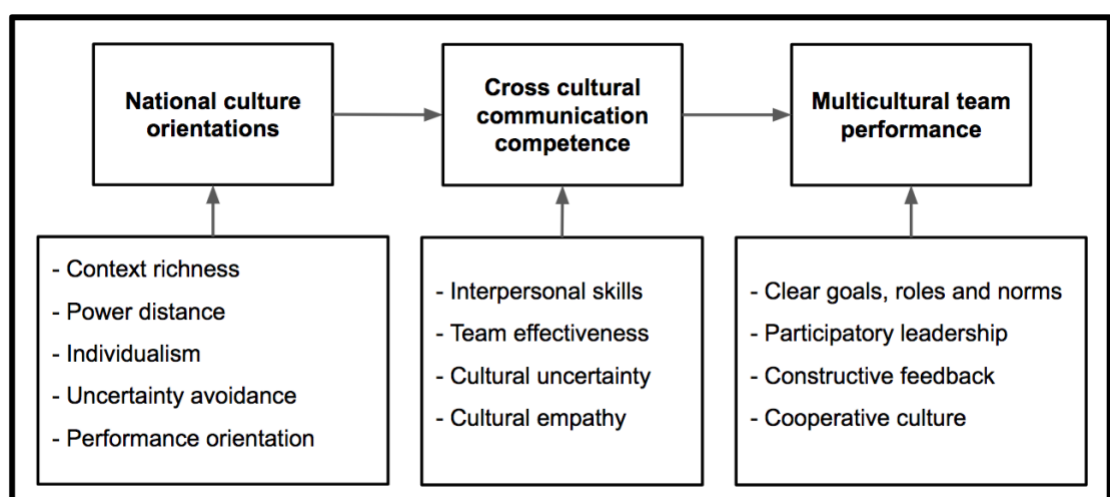


Figure 3. Framework on national culture orientations, cross-cultural communication competence and multicultural team performance (Matveev and Nelson 2004)

2.2 Multiculturalism

"Culture is to humans, what water is to fish," says Kitayama (2002, 90). It is embedded in everything we do and perceive in life, and that is what makes it such a sophisticated theme, requiring more in-depth investigation. Even though research on multiculturalism is a common theme, and is reviewed as part of multiple different areas academically, it is not frequently combined in this empirical context of GVTs (Hinds et al. 2011, 165).

One of the most referenced pieces of work on culture is Hofstede's extensive research on national culture in organizations, and what he later defined as the software of the mind (Hofstede 1991). His research was carried out at IBM, between the years of 1967 and 1973, including over 100,000 employees from 50 countries. His work contains what is known as the primary dimensions of culture, categorized as individualism-collectivism; uncertainty avoidance; power distance (social hierarchy) and masculinity-femininity (task orientation versus person orientation). Particularly the individualism-collectivism aspect of Hofstede's work, when combined with Global Virtual Teams, can be fascinating to study on its own; however, it is not the primary focus of this thesis.

Still, Mockaitis, Rose, and Zettinig (2012) argue that groups that are on the individualistic side will have more difficulties with developing trust within virtual settings, and while unexpected, collectivist cultures end up facing very similar issues. On the long run, due to the characteristic of collective cultures towards loyalty, chances are higher for development of trust, as discussed previously.

Kitayama's study (2002) suggest that culture is broader than what has been described previously, especially contrasting with Hofstede's view of a more national and static culture. What Kitayama suggests is called as systems view, as the culture of an individual is as dynamic as the system around them. While Hofstede (1991) refers

to culture as the "software of the mind," Kitayama explains that culture is not in the head, it is external to individuals and receives input from the collection of actions and behaviors of groups, which include both verbal and nonverbal cues, symbols and patterns.

Through the systems view, Kitayama (2002) comments that different psychological traits are available to all individuals and are shaped like the individual's perception of the world around them. Also, as these cultural characteristics are perceived as being dynamic, instead of static, various teams and organizations can influence one's national culture within distinct contexts and settings.

As a multicultural virtual team seeking to achieve project goals, having different national cultural backgrounds bring many benefits, such as a variety of points of view, abilities, and personal attributes. It can be rather different from a more homogenous and domestic team, made of individuals of the same nation. Each person can contribute with fresher ideas, allowing brainstorming activities to be more efficient and productive (Matveev & Nelson 2004). However, it is important to note that such GVTs are more susceptible to conflicts, including during development of trust and the cycles of team development. Having contrasting perceptions, communication norms and preconceived prejudice could lead to lower performance and less cohesive teams (Jarvenpaa et al. 2004).

This notion of different perspectives derived from multiculturalism allows for solutions and approaches to problems to be thought of in entirely different ways. The understanding of reality is not the same, transforming the way people of various cultures frame issues and needs (Hinds et al. 2011, 159).

As an example, in Australia, it has been observed that the city of Charles Sturt had an opportunity of doing business with China, as their population continues to age, and elder care is becoming a more important service for the future. Having a plan to

expand the city's elderly care services abroad, the team mostly neglected the cultural factor being key to succeeding in such an endeavor. It took the Director of the University of South Australia to run workshops on cross-cultural communication, for the team to start to understand all the nuances of running new businesses outside of their comfort zone. (The Guardian 2016)

To clarify the case above, the Chinese culture follows Confucian principles where they are supposed to personally care for their aging elders, which goes in contrast with the increasingly working population that needs to attend to their business and are not able to spend much time with their elders (Ying 2000). By including Chinese-culture aware personnel in their staff, physically or virtually, the city of Charles Sturt might see things differently than if they were to plan with an Australian mind set only.

Going further using another example, the Germans have been going through similar ordeals. Perhaps, however, reversely. The Germans have long had a superior method for collecting and disposing of waste. As the global population increases so do all sorts of waste and the physical space it occupies. Incorrect disposal brings all kinds of environmental issues to the table. This is when China made their smart move (DW News 2016) and invested heavily in buying EEW, one of Germany's most modern and environmentally friendly waste companies. Thinking systematically, the next issue to be faced is again, the one of culture. Now that directors and officers will be mostly Chinese while the workforce remains German, the question remains on how the company will be affected. It is yet another case of immediate attention from the part of the leadership on ensuring culture is widely discussed and absorbed. Simply providing the "ten most important tips for working across cultures" leaflet does not solve for long-sustainable cross-cultural companies, especially one that became cross-cultural due to an acquisition.

Similarly, Hoeks (2014) points out in her speech at TEDx Harlem, how incorrectly many see the Chinese as cold and careless people. When, in fact, she could understand in her daily life the importance that their culture had to their sense of unity. Removing this aspect of their lives, in any environment, would result in incomplete human beings, and therefore, inhibit quality behaviors that are expected in the business environment. It takes involvement, and commitment from both sides to truly understand each other and create an atmosphere of mutual trust and respect. It goes beyond the typical stereotypes.

2.2.1 Cultural diversity in teams

Various professions have different particularities in how they are executed; however, it is possibly due to how specific majorities have shaped them across the globe. As an example, within the cybersecurity profession, there is a massively higher percentage of white males performing such jobs, leaving very little room for any other minorities (such as African-Americans and Latinos). The US Labor Department statistics show that women have gained some space in this profession while the aforementioned minorities have had their participation decline between 2014 and 2015 (FCW 2016). This is, unfortunately, bad news for how cultures can help shape the world, instead of having the world shape cultures and dictate how professions are carried out globally.

Still for minorities, running away from particular cultural characteristics (thus avoiding stereotypes), may have a backfiring effect. Such groups might suppress their behaviors in an attempt to feel more included when in reality, they are killing their own culture off (Gavin 2014). While a businessperson might see differences as an issue, the world has gained much from all of these different points of view (Martin 2014).

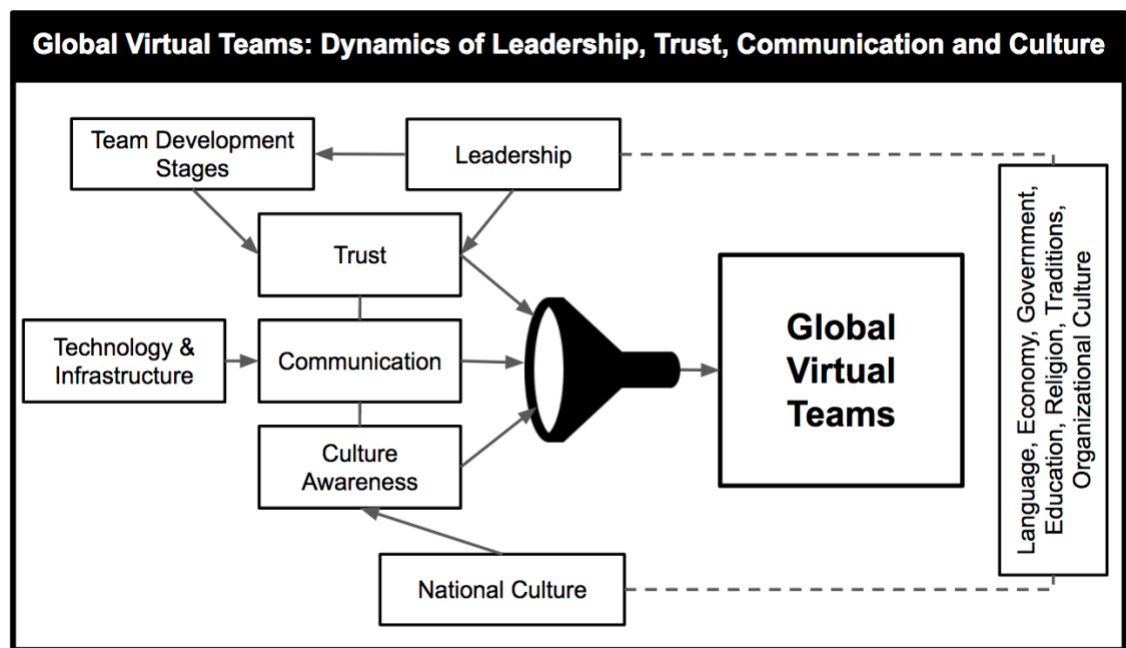
As another example of cultural diversity increasingly present in teams, the talent community has become more open due to advances in technology and several different services for matching talents and jobs. Many minorities are now getting a chance to being part of previously segmented professions. This, for example, comes from so-called contingent workforce management, or in simpler words, freelancers. Companies are tapping into this pool more often as of late, as it becomes evident of the advantages that can be derived from such a practice. Some 40% of executives surveyed by Deloitte (2016) expect to increase their use of contingent workers to fill the gap the current workforce is presenting.

Allowing contingent workers to become part of their teams, brings a new level of cultural backgrounds, as workers can be located virtually anywhere in the world, wherever the skill is available, at a faster turnaround. As said, the virtual element in such a modality tends to grow even more, with workers never even having a chance to meet their colleagues face-to-face during their assignment periods.

At the same time that national cultures play a role within teams, another intriguing element that might influence projects is organizational culture (Kotter 2012). While organizational culture is not part of the focus of this research, it is a critical aspect for future researchers to consider further in analyzing what dynamics are generated based on particular organizations. For instance, Hofstede (1991) describes culture as "the collective programming of the mind which distinguishes the members of one human group from another," and Kotter (2012), as "culture consists of group norms of behavior and the underlying shared values that help keep those norms in place." Both ideas mention this notion of underlying group values, and that can go beyond the pre-existing national culture of different individuals.

2.3 Theoretical Framework: Global Virtual Teams and Dynamics of Leadership, Trust, Communication, and Culture

Through the review of the literature discussed above, the following framework has been developed, showing dimensions that affect the success of global virtual teams. By success, it is meant that these teams can perform highly and deliver their projects according to what has been requested of them.



Global Virtual Teams: Dynamics of Leadership, Trust and Culture (The Author 2017)

Figure 4. Theoretical Framework

There are many dynamics within Multicultural Global Virtual Teams, and as seen in Figure 4, several different variables can influence the outcomes of a team's work and development. The review of literature brings up several themes and topics repeatedly, and the main recurring ones have been included in the theoretical framework, developed by the author of this thesis (2017), presented above.

Issues of trust and communication, brought up regularly by Jarvenpaa and Leidner (1999), appear in several different researchers' studies (Mackenzie 2010; Savolainen 2014), confirming that these are the key and most important aspects for Global

Virtual Teams to be aware of, and why leaders should infuse trust within their organizations from the start. Figure 2 displays a model through which leaders can influence the development of higher degrees of trust in their teams, via team building exercises.

Technology and infrastructure frequently appear as reasons for why GVTs are becoming the "new normal" (Derven 2016; Saarinen 2016). This theme is also associated with how easy or difficult it might be to interact with a specific team, as the less developed the infrastructure is in a particular location, the more difficult it can be to establish regular communication and interactions.

Other topics that appear surrounding GVTs are those of religion, education, traditions and governmental systems (Zakaria 2004; Hoeks 2014; Denisova 2015). Each of these can add elements of complexity that will make the dynamics of a particular GVT more unique and hard to specify through rules and pre-determined ways of working. These points might be explored further during the data gathering stage, through interviews; however, they are not part of the focus of the author.

The work of Tuckman is represented in the Team Development Stages box. It has a connection to GVTs as it plays a significant role in determining whether or not a particular team is performing or not, and the reason for it being a lack of structured norming and storming with the help of a leader. As it was described, moving through the stages of team development up to performing is the goal of most teams, including that of GVTs. The main difference between both is that the interaction, development of rapport and establishment of trust happens virtually, without the physical presence of team members in the same room or office. The relevance of Tuckman's model is still substantial, and its adoption must be strategically planned for GVTs, given the specific needs of these teams (Gluesing et al. 2003). It helps to illustrate what are the dynamics that should be observed by both team leaders and

members of Global Virtual Teams, so teams are better aware of what might be causes of issues, or better yet, causes of successes to be repeated in the future.

2.4 Summary of Literature Reviewed

To summarize, literature was reviewed for the following main keywords and topics: global virtual teams, future of virtual teams, leadership, multicultural teams, trust, and communication. The definition of GVTs, according to Jarvenpaa and Leidner (1999, 792) and Powell et al. (2004) are groups of people who are geographically, temporally dispersed, made of culturally diverse team members, reliant on information and communication technology to achieve project goals within an organization together. Furthermore, to Derven (2016) and Saarinen (2016), given the advances in technology, GVTs have become the "new normal."

Developing countries, such as Brazil, are seeing their employees starting to choose their workplace, and that includes home-offices (Globo 2016). At the same time, new technologies such as Microsoft's Hologram (I3D 2016) brings the reality even closer to GVTs, allowing teams to see each other more than just through web cameras.

Virtual leadership has been identified as a topic of little research by Savolainen (2013). Also, multiple combined definitions describe this role as a social influence practice, enabled by the progress of technology, through which attitudes, feelings, ideas, organizational and personal behaviors are managed (Avolio et al. 2000; Avolio & Kahai 2003; Zaccaro & Bader 2003; Mackenzie 2010).

Leaders are an essential part of every team, and their relevance links to how trust is developed and perceived within GVTs. The leadership role within team development is crucial as pointed out by Dragusha (2012), who follows Tuckman's model (1965) to describe the evolution of performance, from forming to adjourning.

Multicultural teams are given as the norm within GVT environments, and existing research by Hofstede (1991) can help clarify differences in national styles that might affect a team's performance. Examples of Australians working with Chinese companies (The Guardian 2016), and Germans working with Chinese directors (DW News 2016) are just some recent cases of multicultural teams and dynamics generated by these interactions.

Multicultural virtual teams (also known as GVTs) are expected to increase further, based on research by Deloitte (2016), through the usage of contingent workers in an attempt to quickly fill gaps that the current workforce presents.

Communication allows people to create bridges between themselves and enables dialogues to happen, being the foundation of relationship (Dyer 1995; Lipnack & Stamps 1997). Also, virtual communication is reliant on technology and as the basis of GVTs needs to be carefully discussed, as Duarte and Snyder (2011) argue that this form of communication is less efficient than face-to-face interaction. Finally, a framework by Matveev and Nelson (2004) was presented as a theory of achieving higher communication performance within GVTs.

3 Methodology

The purpose of this thesis was to expand the existing knowledge base about Global Virtual Teams and the dynamics generated by them. The real process started several years ago as the author began to observe how these teams behaved and produced different types of challenges than those of the traditional collocated teams that most companies are better accustomed to. The investigated concepts and theoretical background have been explored in the previous chapters, along with reasons why this topic is very relevant in the modern age. Moreover, this chapter aims to explain how the research process was designed and carried out as it was built upon

observations and interpretations that the author had made during the previous years.

3.1 Research approach

Analyzing socially constructed phenomena requires a certain depth of investigation so that the key findings can be interpreted and presented. Global Virtual Teams are a product of technology availability along with evolution in the ways of working that companies have found to differentiate themselves. The author has dealt with this phenomenon via interacting with experts and knowledgeable individuals during his daily work and life through a subjectivist point of view. (Saunders et al. 2009, 111)

As the author had access to documentation and subject matter experts within the global company, a case study strategy was selected, as outlined by Yin (2013).

According to Yin, case studies have been under criticism for many years due to their apparent lack of rigorous procedures, but they are today suggested as the adequate form of research for a contemporary phenomenon within its real context. Case studies are also recommended when studying trust and leadership, which are part of this study (Fergus et al. 2015).

As this is an abstract topic, an exploratory and qualitative study was required to further specify the issues of the study, which were intricate and profound (Saunders et al. 2009, 482). Exploratory research allows for exploring a topic on a deeper level even though having limited samples, while descriptive research would require access to a more significant amount of data in order to better describe a phenomenon. (Gil 2008, 27 - 29)

A triangulation strategy (Saunders et al. 2009, 154) was followed throughout the study, meaning that three independent sources of data were used to corroborate the process and findings of the research. As described by Yin (2013), one of the leading

aspects of triangulation that help the researcher is linking the evidence through multiple data sources and methods. As previously mentioned, the author had been part of the routine of such Global Virtual Teams. He was able to observe the interactions and challenges faced for years, while at the same time having access to the company's documents, such as annual reports, strategic communications, education materials, all of which, at some point or another, had influence over how teams worked at the company including its global virtual format.

Observation, according to Eriksson and Kovalainen (2008, 86), is one of the most demanding types of collecting empirical data, as it requires the researcher to become immersed in the context that is being observed. From 2006 until the present (2017, year of the writing of this study), the author not only watched the social context of GVTs but also contributed to it by being part of several teams, experiencing first-hand challenges and benefits brought by the dynamics of these interactions.

3.2 Research context

To put things into context, IBM is a global company, comprised of over 400,000 employees spread across more than 175 countries (IBM 2016, 76). While several teams are still located in offices and see each other frequently, there is a significant portion of the population who either work remotely at home or simply work at an office as part of a team formed by other remote workers spread across a country or globally. As reported by the Fortune Magazine (2009), there were already 40% of virtual workers within the company's workforce.

Not only this topic is relevant to the future of IBM, but it is also for other companies following similar steps in trying to reach a more diverse and available workforce, which encompasses virtually every company that uses the internet to conduct their business and operations. As reported by The Economist (2015), GE has 50% of its

employees based abroad, and Toyota has a share of 38%. Research by the New Jersey Institute of Technology (2015) indicates that 34% of the business leaders forecast that over 50% of their workforces will be working remotely, thus virtually, by 2020. Culturally speaking, companies such as Google, Facebook and Salesforce are hiring 'diversity managers' to ensure that diverse points of view are respected and leveraged within the organizations, as it is known that diversity can boost and drive innovation (Hewlett et al. 2013, Salesforce.com 2016).

3.3 Data collection

As previously mentioned, a triangulation approach (Yin 2013; Saunders et al. 2009, 154) has been followed in this study. There was observation within the context, documentation review and interviews with participants of the research context, such as managers and team members of GVTs.

Natural observation happened first, as the author has been employed since 2006 with the case study company IBM. From the very start, the author had been involved in GVTs, having his first projects as a team member of projects led by US project managers. The situation remained similar until years later when the author was the global lead for initiatives that contained team members of different parts of the US, Mexico, Argentina, Brazil, Slovakia, Romania, China, Japan and Australia. Since 2015, after having moved to Finland, the author has been involved more often with colleagues from more European countries and India, decreasing the gap of having a truly global network and experience.

This natural observation process, also known as participating observation (Gil 2008, 103), led the author to a more systematic observation approach (Gil 2008, 104), where he started collecting thoughts and best practices from his point of view and those of colleagues and managers, about working with global virtual teams. These

best practices included ways of working, communicating, building rapport and managing cross-culturally. The documents put together were presented in knowledge sharing sessions from 2012 to 2015, by the author, to global colleagues in their local offices, expanding the organizational competencies of working cross-culturally via the internet.

These best-practice documents were built based on observation and research of internal documentation. As such materials are proprietary, they cannot be displayed here; however, they helped in developing the background and basis of this research. Such documents included annual public reports, containing statistics and broader strategic announcements, as well as methodology databases, containing hundreds of methods and ways of working, all built by IBM for IBM. One example which can be seen outside of the IBM network is the Country Navigator (countrynavigator.com). It provides intercultural training to all employees, and is the point of reference for everyone that starts working with someone from a culture they have never worked with before.

To close the triangulation approach, further qualitative data were needed, and the method of interviews was chosen. Using the interview method provided the researcher with the ability to control the data gathering process within the context of its happening. The preferred format of the interviews was semi-structured (Eriksson & Kovalainen 2008, 82) which resembles more of a discussion, allowing the responses to be more openly debated without the need to stick to predefined questions and their order. In fact, it can even be said that interviews are simply a conversation with a purpose (Berg et al. 2014, 105), and that was the approach taken in this study.

A set of questions (appendix 2) was put together simply to guide the conversation, to ensure that the interviewer could cover the various areas of focus of this study, along

with a shorter version (appendix 1) that was shared by email before the interviews taking place. Providing these questions to the interviewees in advance, as suggested by Saunders et al (2009, 485), allowed them to be better prepared and more quickly refer to their experience during the interviews.

The main categories of questions were designed based on the theoretical framework (figure 4) which was derived from the reviewed literature and experience of the author. The figure below represents this categorization:

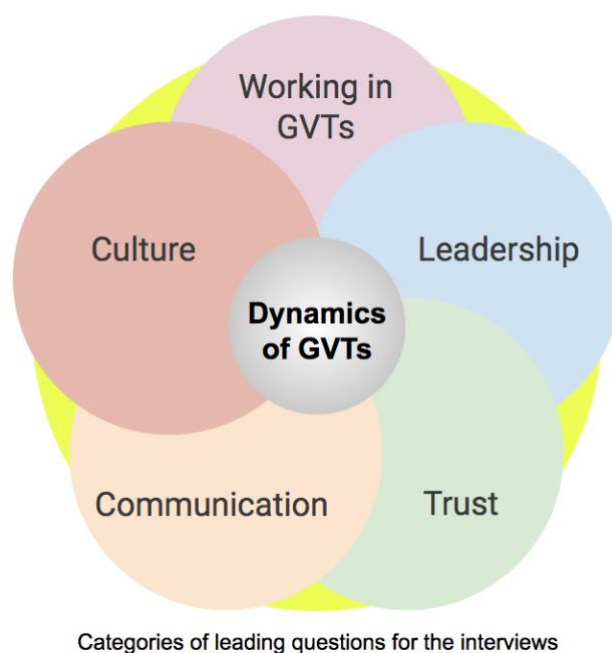


Figure 5. Categorization of questions for the interviews

To have the questions answered, participants were chosen based on the following criteria which required that participants were either functional team members (such as engineers, specialists, and analysts) or leaders (such as managers, project managers, and team leaders). Their tenure (length of employment) had to be of at least five years, and they were required to have had experience working in GVTs as a full-time role for at least three years. To be more specific, the team in which the interviewees participated had to have team members of at least two different countries and their work fully supported by technology and internet-mediated

communication. As for their tenure, it was considered time working with IBM.

Additionally, an equal number of males and females was chosen, solely for a gender equality principle, as the author did not carry out any additional research based on gender specifics.

Interviews were scheduled between June and August of 2017, based on the availability of the interviewees. Each interview was recorded for later transcription via a mobile phone or computer software, with previous authorization of each interviewee. Transcription was first done with the aid of IBM Watson's artificial intelligence technology, known as Speech-to-Text, however further manual adjustment had to be carried out word-by-word by the author, to remove irrelevant or incorrect words, mumbles, and pauses. Sentences were naturalized, meaning they were adjusted to read more naturally, without changing the meaning of the response of each interview. This allows the researcher to focus on what has been said, acquiring facts, rather than trying to interpret how and why words were said the way they were (Bailey 2008). Moreover, most of the participants did not carry English as their mother tongue which increased levels of grammatical deviations and were corrected during the transcription phase. This method is also known as smooth or intelligent verbatim transcription in the transcription business.

Given the global context of the research topic, most interviews were carried out virtually via video-conferencing tools, such as Zoom, Uberconference, and Cisco Webex. In fact, only one interview was conducted face-to-face, and it took place in IBM's office in Helsinki. The following table is to summarize gender, nationality, work location, role, the date for each of the interviews and whether the participant held a manager role or not. Out of the 10 participants, 5 held managerial positions within the company, and 4 of them were male. Others holding leadership positions were not formally responsible for any HR activities, therefore not considered as managers in this study.

ID	Gender	Nationality	Location	Role	Interview date	Manager?
Int01	Male	USA	US, North Carolina	Manager, Technical Support	6/13/2017	Yes
Int02	Female	Finland	FI, Helsinki	Business and Project manager	6/20/2017	Yes
Int03	Male	USA	US, Hawaii	Lead Designer	6/21/2017	No
Int04	Female	Kenya	KE, Nairobi	Financial Controller	6/27/2017	No
Int05	Female	Madagascar	MG, Antananarivo	Financial Analyst Coordinator	6/28/2017	No
Int06	Female	Slovakia	CN, Dalian	Global Project Coordinator	6/29/2017	No
Int07	Male	Singapore	AU, Sydney	Manager, Global Sales Technology	7/14/2017	Yes
Int08	Male	USA	US, Bethesda	Global Executive	8/23/2017	Yes
Int09	Female	Japan	JP, Tokyo	Sales Management Integrator	8/29/2017	No
Int10	Male	Brazil	BR, Rio de Janeiro	Director, Pension Fund	8/29/2017	Yes

Table 1. Summary list of interviewees by nationality, work location, role, and interview date

To represent the varying level of experience of the interviewees and their time of experience in general, a separate chart was developed. It is displayed below for faster comparison:

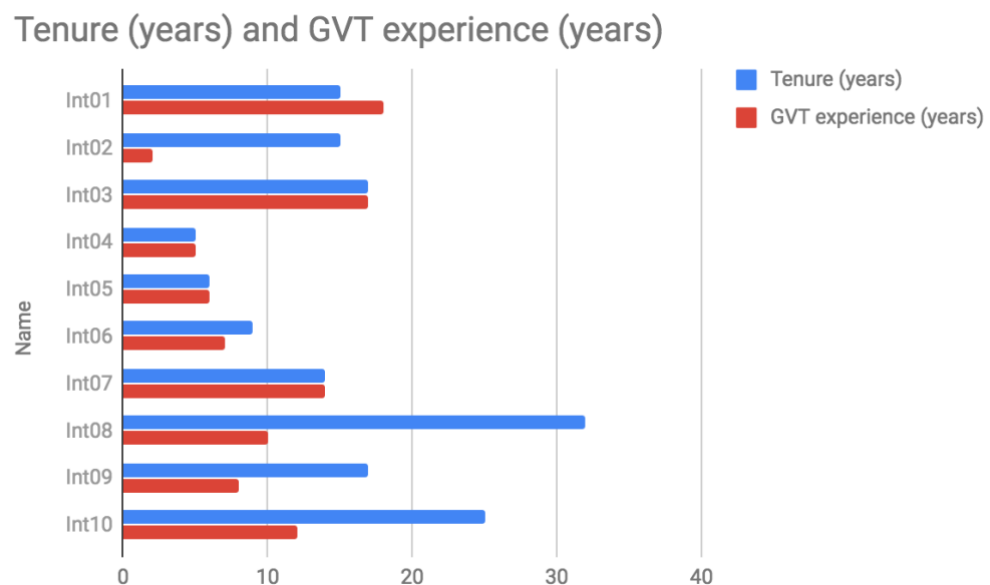


Figure 6. Tenure and GVT experience by years for each participant

To provide a visual representation of the nationalities of the participants of this study, the following figure was generated. As mentioned previously, the selection criteria took in consideration the multiculturalism and global presence as important

factors, including the fact that 2 participants were originally from one country but had been working at a different country at the time of their interview, as shown below:

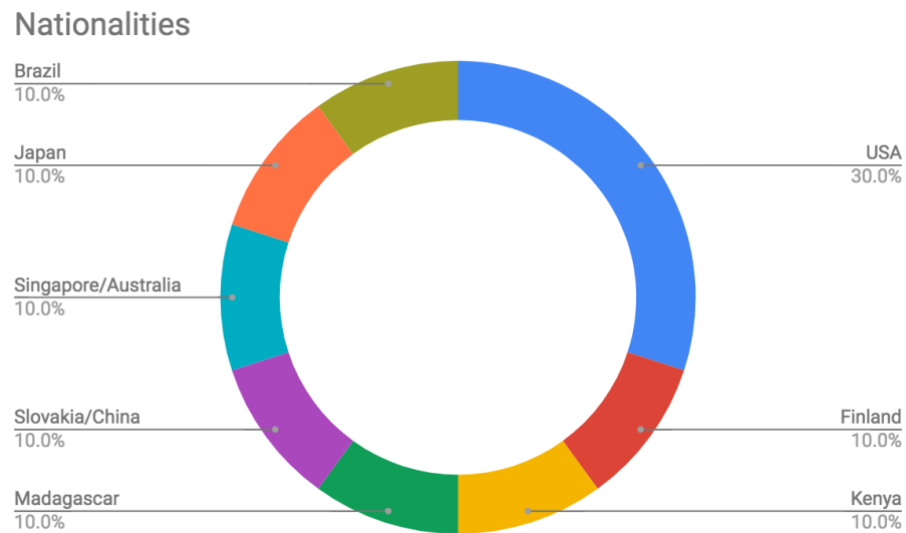


Figure 7. Visual representation of the global representation of interviewees

3.4 Data analysis

The chosen methods were content and thematic analysis, which allows data to be arranged in a concise and organized fashion, avoiding the possibility of losing information or missing important details. This phase can be long and cumbersome, as reading through the transcribed interviews requires a systematic approach with careful attention to details, allowing for inference and links back to the reviewed literature, while coding, categorizing and finally grouping themes for later analysis of patterns (Braun & Clarke 2006, Gil 2008, 152). For better illustration, the figure below has been drawn by the author to represent the process followed:

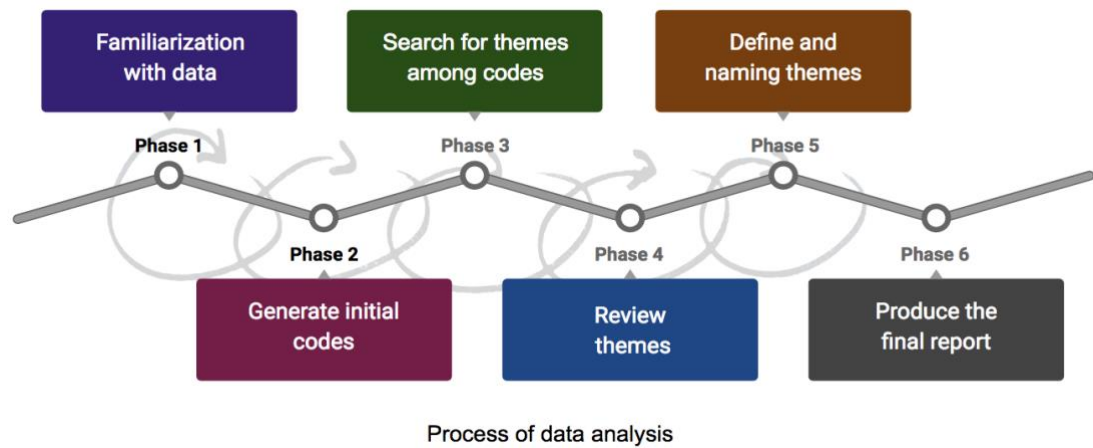


Figure 8. Process of data analysis

It is important to highlight that the first five phases were not performed only once and in the same sequence. As the author became wiser and more accustomed to the coding process, it required re-reading the interview transcripts, re-adjusting codes and moving them from one category to another, multiple times, as represented by the circling arrows.

An inductive approach (Gil 2008, 10) was followed through during the analysis, as the author initially designed the interview guide based on the literature review. It provided an initial framework of reference (as seen on figure 4) and common question categories, but at the same time through a semi-structured interview approach other themes had the possibility of surfacing. This approach brings further validity to the results, as the data collection was designed based on prior scientific knowledge, aiming to expand it.

All interviews were recorded as audio files to be analyzed afterwards, and altogether they accounted for 8 hours and 12 minutes of audio content to be transcribed. An average of 1 hour was spent transcribing every 20 minutes of material, meaning about 24 hours were spent in total with listening and typing. The language of choice for almost all interviews was English which simplified the transcription and analysis process. The only exception was the interview with the Brazilian participant, as

Portuguese was more comfortable for both, and allowed for the interview process to be carried out more smoothly.

Once everything was transcribed and translated, documents were loaded in NVivo for reading and coding. As the author had never used NVivo before, there was a learning curve to get started. The investment in getting used with NVivo paid off, as it became much easier than trying to manage all codes through a spreadsheet, for example. Renaming codes, moving from categories and themes, and especially re-coding is much faster and easier through NVivo. For final manipulation, however, an export of all codes and attributes, including the coded reference texts was created for additional manipulation and quicker filtering options in Excel.

The initial snapshot was taken after all transcripts were coded and it rendered 100 different codes and ten themes. Several of these codes were similar and carried related meaning; therefore, they were merged multiple times until having a final list of 50 codes and four main themes: leadership, trust, communication, and culture. Moreover, two extra themes, benefits and challenges, were analyzed separately to answer the sub-questions of this research, containing 15 codes. The principles behind grouping and coding were aligned with the theoretical framework of this study, and the number of codes allowed for the framework to be analyzed at a more conceptual level containing multiple dimensions that emerged during analysis. Table 2 is a visual representation of the coding exercise performed, displaying at the top the four main themes and their related dimensions, in order of quantity of references found in the interview transcripts.

Communication	Culture	Leadership	Trust
Frequency	Awareness	Empowerment and Accountability	Relationship
Language	Differences	Empathy & Listening	Team trust
Instant messaging	Language differences	Coaching	Trust building
Video conference	Expectations	Show appreciation	Transparency
Communication tools	Holidays	Conflict management	Face to face
E-mail	Decision making process	Crisis management	Inclusion
Explicit communication	Gifts	Shifted time	Professional Development
Targetted communication	Organizational culture	Change management	Respect
Phone conferences	Perception of time	Expectations management	
	Respect	Flexibility	
		Structure	
		Surveys	
		Asking specifics	
		Engaging people	
		Time buffer	
		Cultural Awareness	
		Flexibility	
		Independency	
		Persistency	
		Speak up	
		Time management	

Table 2. List of the four main themes and subsequent codes

Table 3 is a second list of codes that represent the second perspective of the research. It answered the sub-questions about strengths and challenges, and therefore was analyzed separately. In total, six weeks passed between the initial coding exercise and the initial write up of the results and discussion chapter, where findings from the collected data are presented and further analyzed.

Benefits	Challenges
Access to special talent	Time zones
Wider range of ideas	Infrastructure
Evolution & Future	Challenge of distance
Work life balance	Cost restrictions
Cost savings	Government
Holidays as advantage	Agile methodologies
Time zones	Micro management
	Shared resources

Table 3. List of themes and subsequent codes about benefits and challenges

4 Results

Through this chapter the author presents the results of the interviews conducted to answer the research questions of this study:

- What are the dynamics of leadership, trust, communication, and culture in Global Virtual Teams?
 - How can GVTs overcome the challenges of multicultural diversity and team virtuality?
 - How can GVTs leverage the strengths of multicultural diversity and team virtuality?

Dynamics represent the interaction of different forces that produce various outcomes when combined. For instance, this thesis studies the effects of combining multiple variables in Global Virtual Teams environments, and their importance towards the success or failure of endeavors taken by organizations. While the nature of the study was exploratory, it has leveraged opinions and experiences of expert professionals working in such teams, allowing the researcher also to capture suggestions on how to leverage strengths and how to overcome challenges introduced by these dynamics of GVTs.

Post analysis of the collected data, an exhaustive list of codes was generated. They were combined into themes and were explored further in the following sub-chapters, along with quotes taken from interview transcripts, to support each of the four primary constructs: leadership, trust, communication, and culture. An inherent factor to highlight is that none of the interviewees worked in the same team or even in the same organization during the period of the interviews. As IBM is a giant enterprise of hundreds of thousands of employees, thousands of groups exist performing particular functions and projects, meaning each separate team may end up having specific practices, values, and ways of working. Some interviewees worked on more global projects than others, implying a larger number of countries and cultures were represented in their teams, while others were only crossing geographical barriers of 2 or 3 countries. At the same time, some projects were purely virtual, and others had the opportunity of sitting next to team members from time to time. An interesting

finding is that these variations in the environment of the various teams did not introduce additional dynamics which suggests the four main analyzed constructs are very relevant. As previously mentioned, to better illustrate the facts captured in the interviews, selected quotes from the transcripts were used in the upcoming sub-chapters.

4.1 Dynamics of Leadership

After conducting the data analysis, the author realized that the **leadership** construct could be considered as a more extensive umbrella of themes, embodying the other three main theme constructs to be discussed in the next sub-chapters. Nevertheless, it was still kept separate for the sake of this study, meaning 27 dimensions were identified based on the analysis of interviews and the most recurring ones were further explored.

To start, according to how the responses were gathered, **setting a vision, providing clear direction and defining responsibilities**, are some of the top focus skills any team leader should have when working with GVTs. As mentioned by Interviewee 04, *“If you’re the leader or facilitator of the virtual project, from the onset people need to know why they are there.” (Int 04)*. Other interviewees have expanded on the importance of setting clear goals:

“There are challenges and you have to be clear to the team to what is the structure, who’s got responsibility for what, so you have to be very clear on responsibilities. When you have people in different offices that are aren’t sitting together and aren’t meeting together regularly, you have to make sure you’re clear on who’s got what responsibility, who’s going to do something, who’s responsible to oversee it... (Int 08)”

“If I do not have a clear definition of the goals, and know how to give clear feedback on those goals, the employee will not be confident because he is distant, remote. (Int 10)”

"So maybe I think the important thing is to realize that they need one goal. And at the same time to explain to them why that is important to work towards that goal. If you basically unite them to work towards that goal, I think that makes things easier. (Int 06)"

Additionally, **defining clear responsibilities** brings more transparency to the project team. It also aids in building **trust** and setting **expectations** for the virtual teams.

"Everyone would be assigned clear roles, who is taking care of what, responsible for each area, and a slide would be created for everyone to see. And I think that was also a good way to build trust and relationship, and to clarify who is going to do what. I have had projects where nobody clearly knew what the others were doing, and that makes it much harder to go on a daily basis. (Int 02)"

As stated by Interviewee 10, "the overall idea is all about empowerment and accountability. Without this psychological contract, we cannot make virtual teams work".

Empathy and **listening** skills have ranked high on the list of codes within the leadership theme. The fact that a leader takes the time to understand those working with him or her, and most importantly listen without judgment, has been mentioned as key attributes for the success of GVTs:

"I think if you're a leader for a multicultural team, you need to learn to listen very deeply, and listen to how messages are delivered, and how the team is interacting, rather than speaking only yourself all the time. (Int 07)"

"I try to acknowledge where everyone is, try to keep things at a level that is not specific to my own country, being mindful of where folks are, where their time zones are, and putting myself in their shoes. (Int 03)"

On a day to day basis, it was also mentioned that leading GVTs requires more **coaching**. This is especially true as team members can be physically isolated most of the time:

"What can be a challenge in those conversations is that often that person is so technical that they are the ones who know best whether or not they're headed in the right direction, so that's why it's a little bit of an interactive conversation. It's almost like being in a therapist's office, counselling with a therapist. They're trying to help guide you to get to the answers that are already inside you. (Int 01)"

More explicitly open actions are recommended from a leader's perspective, for the same reason that team members are not seeing each other on a daily basis. **Display of appreciation** is one of such actions:

"If I were to have a kick off to coordinate all of these (virtual) folks, I would certainly try to address those points: ways we can work together, ways we can share our culture, share our experiences and become a stronger team and a better team forward. Rather than being a negative thing, it is actually a positive. (Int 03)"

Being specific and clear when making requests is also perceived as a useful skill. As one interviewee stated:

"I always try to have them answer when is it that the work can be done by, then I will do some closer following up, just to ensure there is nothing wrong. It also helps me with communicating with the Japanese colleagues, as well. We, Japanese, tend to assume we know what other people are thinking, but don't necessarily clarify, and do not ask for details. Sometimes I try to ask more detailed questions to understand what they really mean. (Int 09)"

And to ensure you are heard, you have to **speak up**. As an example, when you are new to a project or trying to take an extra leadership role:

"The second recommendation is for the new person, is to jump into the pool with everyone else. If you stay outside, then you're left behind. Basically you have to participate and speak up, otherwise it is hard to be heard, as the rest of the team is already performing as a unit, but not you. Always try to say something so that people know you are there. (Int 05)"

Interestingly, some interviewees have asserted that having a **technical background** helped them in making GVTs function better. It allows them to better deal with technology and converse with technical teams:

"There's definitely some technical knowledge needed so you can help guide your own team, and of course follow IBM's direction. (Int 01)"

"I think it's also helped me in my job now and throughout my career in different areas, as I can really relate to our development team and programming teams as I talk their language, if you will, as we go through and do the things we need to. Similarly with the financing expertise I possess. (Int 08)"

Being **flexible** in regard to project schedules and time zones is another aspect. It can have an impact on improving the working environment:

"I actually changed my own behavior. Generally, I wake up around 3 or 4:00 am my time. I've adjusted my schedule to be more in line with the global centers and when they're gonna be active, and it made a huge difference. Now I also get to log out early in my day and have a nice work-life balance. (Int 03, who is in UTC -10)"

"I also try to be as flexible as I can with time, adding some buffer to my requests, for example, so that I still had time if the team was late with their delivery. (Int 09)"

Finally, some of the other comments that refer to specific skills that enhance the leader's' toolbox when working with GVTs were listed next. They summarize the ideas of **persuasion, and change, conflict and crisis management**:

"In today's environment, change is all around us, so the ability to handle change is very important and very key. That's a skill that I think is important in our environment that we work in. (Int 08)"

"It is key for one to know how to get people's attention and keep it during the virtual meetings. Be to the point, and know what you want to communicate, so that people will be engaged. Trying some jokes or random stories in the middle of discussions, asking questions from people, all helps in keeping people engaged. (Int 04)"

maintaining trust enhances **relationships**, thus improving **sharing of knowledge**, **collaboration**, **motivation** and overall **team morale**. All of the interviewees commented that developing trust is essential and should always be kept on the radar of GVTs, and actions should be taken to avoid harming the trust levels of any given team.

When asked about ways to develop trust within GVTs, many respondents argued that the fastest and strongest way to get people to bond and trust each other, is to have them **meet face to face** at the start of a project, or as soon as possible when they join a new project. The following example illustrates this point:

“It is important that the Global Team should somehow meet face-to-face once. It should be considered in the budget for the project, that people should somehow meet at the earliest possible. It would help the project to be more smooth, as we are all humans and would connect better at that level. We could, of course, use Skype, Zoom or any video conferencing tool, but it is not the same as meeting physically. You don’t really need to be out for 5, 10 days... just one day would already add a lot of value to how the team interacts. For one of our projects we had that chance, and it worked great. Then some people would join the team later, without that same chance, and it took a lot longer for them to get efficient. Even if we helped a lot, the newcomers had a harder time to fit in. (Int 05)”

It is clear from these comments that we, as humans, are much more able to develop trustful relationships if we get a chance to **interact with our peers physically**. For instance, these comments:

“That’s important when you’re building a relationship and in getting things done, it’s just that much better when you have a good rapport with them, that you build through a personal meeting. (Int 08)”

“During the time I was working in the project, 2 or 3 of the Indian guys came to Finland for a few days, which made it much more easier because then I was able to create some type of personal relationship with them. (Int 02)”

"For example, here in China the relationship between our colleagues is so important, sometimes more important than the business outcomes. (Int 06)"

Not surprisingly, the notion of **relationships** came in as the number one under the theme of trust. Healthy relationships to Global Virtual Teams are vital:

"Just want to emphasize that it is important to build some kind of personal relationship. Best way is to get people on site or go see them, but it's not always financially possible. But try to do it virtually over the phone, asking personal questions and try to create that link. It helps and it feels more personal. (Int 02)"

"Honestly I believe it's important to build a relationship. At the beginning I didn't realize this and, for me, the most efficient meetings would be the ones where we get directly into business and all the issues are discussed and we get to solutions as fast as possible. But as I started to work with different countries and different cultures, I realized that investing time to know the people, to know them better, what they like, not just professionally, but also personally, sometimes opens you to doors, that basically aren't there if you just dive right into the business. (Int 06)"

"I like hearing people's stories, what they like and what they are doing, what are their concerns. I think it really helps to create the atmosphere as a team. I don't really do it intentionally, for that purpose but, it's more fun to have that kind of conversation where we have that personal connection. (Int 09)"

Technology is yet to reach a level where humans feel they can connect with each other from far distances, the same way they feel when face to face. However as pointed out in the previous comments, this is not always possible. And as it is discussed in chapter 4.6, one of the main benefits of GVTs is the possibility of delivering projects at lower costs which would be otherwise increased by travels. Some respondents commented how they **tackle this issue virtually**:

"So I take the time when I first get a team, and devote a good meeting or 2 in the beginning just to understand who they are and what their interests are, that helps for them to feel secure, that they can feel comfortable, that somebody has their back and is

looking out for them, for example if there's things that come up in their personal lives that they need direction or help on, or just need to have somebody to understand where they're coming from, that does help in the trust. (Int 08)"

"When I'm working with my team, I want them to know that I am a supporting role. My people are the superstars. I want to be there being the enabler, providing them with the support and encouragement, the resources they need, and a big resource is trust. Part of that is feedback in how they are doing, in a timely and effective manner, in a way that is not dispiriting but rather helps them focus their efforts in the right place. (Int 01)"

"When South America boarded the project at IBM, I tried to really understand Brazil and Argentina, pick up a little bit more of the local expressions to make that human connection. (Int 03)"

"I was also doing 360 degrees feedback with the teams. This happened in an anonymous way, but that helped everyone so they could see what others were thinking of them in terms of strengths and weaknesses. This was one way I found to try and help enhance the working situation, as we were sitting in different places and not directly together. This at least allowed to generate some more trust between the team members. (Int 09)"

At a more specific level, one participant explained they use a team **goal-oriented strategy** to enhance team trust. This helps members of the team to continually work together to achieve a common goal:

"Among individuals, they all have personal goals and common goals. The goals of the year are reviewed every quarter, and so we try to design goals in which team members have to work together, so that they can complete each other, achieve goals, and then get to trust one another. (Int 10)"

Inclusive leadership and providing people with a sense of **belonging**, aiming to develop team trust and further improve **teamwork**, were also discussed. Some examples:

“Providing equal opportunities, open conversations, so you're not leaving people out when you refer to particular things, you're considering everyone. The concept of inclusion is really important for the development of trust. (Int 07)”

“Our organization has a virtual forum, as well, where all the centers collaborate and learn together. Once a month, a different center presents a theme related to the pension area and it helps to generate this sense of belonging to the wider organization. I think it's important to unite the team and create this synergy. (Int 10)”

And another technique to boost the team morale is to simply **acknowledge and thank them** for their work regularly. A rather simple solution:

“Every action that someone puts in, you have to make sure they get credit for it. So one is to ensure that in your communication you thank people for doing what they are doing and acknowledge their contribution. (Int 04)”

The word cloud for the text coded under the theme of trust is displayed directly below. Some of the highlighted words are personal, team and people, followed by important, communication and relationship. These are keywords that when summarized, bring close attention to both relationship and communication as key ingredients of trust, along with once more the notion that teams are at the heart of success.

4.3 Dynamics of Communication

Humans **communicate** all the time, and through communication we have evolved as a species. It is through communicating that we **share knowledge**, develop **relationships**, **lead** others and **make things happen**. Communication can make evident that which is hidden or unclear from an outside perspective.

This research focused more on how teams communicate, and respondents initially mainly talked about which technological **tools** they used, but not much about ways of communicating, regardless of the media. As technology-mediated communication is part of the essence of Global Virtual Teams, they are further exposed in this chapter. However, it is important to point out that **cross-cultural communication** is not that simple. Interviewee 07 made the following remark:

“Communication is always a challenge. It’s like chickens talking to ducks. Even though we as humans can speak to each other, we have different backgrounds, so it can be much slower in understanding each other. Language is always proving to be the most spoken about challenge. (Int 07)”

The expression “Like chickens talking to ducks” comes from a Cantonese saying that literally translates to “a chicken and a duck talking,” or 雞同鴨講 (gai tung aap gong), but is used in the context of communication barriers. Even if all communicators utilize the same **language**, their cultural background can interpret words differently, directly impacting in how messages are transmitted. This notion highlights the importance of culture, and its dynamics were explored further in sub-chapter 4.4.

Additional comments from interviewees prove that **language**, in the context of **efficient communication**, is still a significant challenge and can directly impact the project team:

“Simply not understanding what other people are saying, even though we are a company that works in English. There are different levels of English capabilities. I remember being

on a call with somebody in Brazil and somebody in California, and at the exact same moment they both messaged me via instant messaging, saying "I can't understand what he or she is saying". She was talking too fast for him to understand and he was talking not too strong from an English perspective for her to be able to understand. (Int 01)"

Interviewee 01 provides insights into how a specific situation could have gone better.

This also applies to other similar cases happening across organizations:

"I think that there was a lack of patience on both sides. One thing that could have helped in that case would be a little bit more patience, more understanding, more empathy for the other person. I've always said this, you're working in your second or third language. This job is hard in my only language. This is a hard job and you're doing this in a second or third or fourth or fifth language. How you fix that is by being slower, more careful, more understanding, and using text messages in the meantime to clarify anything that may be hard to understand. (Int 01)"

In fact, other responses further support this idea of backing up **verbal and oral** language with **written** messages. Useful whenever language proves to be a challenge:

"As English is not my first language, I always prefer to leave a written record so it is best when clarification is needed. This is also true due to time zone differences. It also helps the other side, so everyone can track progress and make sure we are all on the same page. (Int 09)"

"And sometimes that also applies to cultural and language differences, as sometimes teleconferences are not that easy to understand each other. Sometimes it is better to communicate via written instant messaging, which is clearer and there is a track record. (Int 02)"

Hard and thick **accents** and **noise** caused by the quality of devices and **infrastructure** can also pose a barrier. Especially when communicating virtually and verbally:

"My key challenge is the different accents when communicating in calls and virtual meeting rooms. My solution is to repeat what I think they said and get them to clarify the points again. (Int 04)"

Frequency of communication was the number one topic within this theme, and in summary, interviewees suggested that keeping regular cadences of communication can have a very positive effect on the overall dynamics of the team. It raises **transparency**, enhances **trust** and, consequently, brings the team one step closer to success:

"Communication has to be often enough. Agree on these repeating status meetings, so that you don't then realize it has been 3 weeks since you spoke to the team last time. (Int 02)"

"Even if with some intense periods or during some intense periods of the project, you need to communicate on a daily basis. That's more like a status check and clarification of open issues. If there is the whole team present or most of the team present or key team members, there are always things that somebody raises only in those status meetings. (Int 02)"

"Every Wednesday in the morning we have weekly calls, with outlined deliverables, and a roadmap. We check where we are and want to go. The main mode of communication is via conference calls and online meetings, to share presentations. (Int 04)"

"I have meetings periodically with the team leaders to make sure they are also driving for that position. (Int 08)"

"It's very important to set a recurring communication cadence. And this must be done at the same time every week, to establish a reliable information channel. (Int 10)"

"On a face-to-face scenario you have discussions more regularly automatically, but virtually I tried to have at least bi-weekly scheduled phone calls to keep in touch and stay on the same page. If we were all in the same office, then I would just have normal meetings about the work itself, as the rest could go more naturally. (Int 09)"

Lastly, **technology-mediated communication** happens through computer software. And the participants mentioned that the most common and frequent media they utilize are: email, audio and video calls, and instant messaging. In addition to these traditional media, forum boards and blogs were also mentioned as helpful ways of collecting information and setting passive channels for people to join when they have time. Tools evolve constantly, and perhaps the most interesting finding under this arena was the use of Slack, a recently developed communication software which combines and simplifies functionalities of the most traditional tools.

“You know, initially it was primarily email and then we moved on to instant messaging and now I'm using tools like Slack and other technologies that are more emerging. It has just become easier and easier to communicate with global virtual teams, whether that be Europe, America, Asia, they kind of you know eliminate the time zone challenges to an extent. (Int 03)”

“A combination of Slack and Webex are definitely the top preferred methods for contacting within this team. (Int 07)”

“We also use video conferences, and the advantage there is that you are totally dedicated to that meeting, while without video, you can end up multitasking, and you end up losing attention in a few moments. (Int 10)”

“And blogs, forums, I think they are useful as you can get ideas there, but not for real-time communication. (Int 06)”

Overall, **instant messaging** seems to be the way GVTs have found to survive without being physically sitting next to each other. Slack has become a strong favorite, but other instant messaging tools, such as IBM's Sametime, Google's Hangouts or Microsoft's Skype are still frequently used. It is the closest we currently have to real-time face-to-face interaction, considering the varying levels of infrastructure worldwide:

"In years past you had to send an email and wait, now we can keep running conversations through tools like Slack and whatnot. It enabled it to be much more easy to continue that stream of communication, regardless of location. (Int 03)"

"Now with Slack becoming a bigger thing, for my organization it allows us to have communication that are nearer with people, where they're leaving a message for you and you're able to respond at your time frame. Yesterday I started checking Slack, and ended the day again in Slack, chatting with a teammate in Australia, working through some questions that that she had and I was doing that near 10PM my time. (Int 01)"

"Things like instant communication would work much better, if there is a gap in language especially. (Int 07)"

"We also use instant messaging a lot for things that we need to get immediate attention to. (Int 08)"

Phone and video conferences allow for humans to communicate much more quickly. Through voice patterns, or even through **body language and expressions**, access to hidden or unspoken messages is more efficient and prominent:

"If we need to discuss something as a team, for me the best thing is really video conference. Since now this is possible, I honestly don't recall when I had a purely audio-only phone call. (Int 06)"

"I do video conference calls, as well, technology's gotten somewhat better in recent years, but on previous years it was mostly just direct phone calls. (Int 08)"

"Also when we have conference calls, quite often we have video on, as long as it is within normal hours. For example, I wouldn't turn on my video if I were attending a late night call, say 11:00 PM, just about to get to bed, I wouldn't put myself on the video. So it all depends on the environment, but of course, if you're all dressed up for work, or it's the start of the day in the office, you usually will have video on. Video is great when you are trying to assess the level of listening, like body language, to see whether people are really paying attention and listening, and if they are more curious about any specific topic. (Int 07)"

Figure 11. Word cloud for the communication theme

4.4 Dynamics of Culture

“Maybe I'm going to say this because I'm biased but I honestly think, maybe not the most important, but mostly underestimated soft skill is the knowledge of cultures. (Int 06)”

Culture is the fourth theme that was explored in this study, which is also part of the essence of GVTs. Even if a team is only represented by two different countries, it can be expected that cultural **differences** will be present in their daily activities. Understanding such differences, being **aware** of them and knowing how to leverage opportunities and deal with challenges are success enablement factors that every GVT member should have experience with.

Cultural awareness and knowledge are considered **cornerstones** by the participants of this study, and while it is difficult to avoid stereotyping, the aim of this study was not to define profiles for any specific cultural groups, rather enlighten the way for those seeking to improve how they work within GVTs. For instance, multiculturalism can be seen as an **extra motivation** to those working in such teams:

“For me it's been really awesome because I personally enjoy different cultures and foreign languages. I've always had an interest in foreign language and world travel and just different countries and different cultures, so for me working with the global team is extremely stimulating and very satisfying, for my own personal growth and knowledge. Learning about other people, learning other languages, learning other customs. Going back to just a US-based company would be so boring. I just really love working with people from all over. (Int 03)”

“It has definitely broadened my horizon, I think. You become more open-minded about things, not just about the cultures in general, but about everything. It helps you think a little bit more outside of the box. (Int 06) “

Some of the participants suggest that one should seek further knowledge about a particular culture they will start working with. It is worth the time invested:

"If you're going to be interacting with a particular country or particular people, I would say that you need to go to research that country and their habits, and their cultural traits, and what you should be doing and not doing before you start. I think that's very key to understand that. As for example, if you travel to a country, it is important to check things, for example what is their culture for tipping. Do you tip the taxi drivers, do you not? Do you go tip the waiters and waitresses in a restaurant? (Int 08)"

"In the U. S. we can sometimes be very US-centric, and I think that that doesn't serve us well in the global environment. We need to be more understanding of other cultures. And also put effort out there to learn about the culture, to learn some of the language, learn some of the traditions and other things, and holidays, and all that goes in showing the folks you are working with that you actually care. I think that's really big in making it effective. (Int 03)"

Some specific aspects of working with cultures were surfaced. For instance, **decision making and expectations management**:

"A critical factor with that is that decision making varies a lot in each different country. In some markets they feel like they need everyone's concurrence before making a final decision, taking more time, understanding everything that needs to be considered upon, and what's being committed to. And some other countries are quicker to make decisions, but at the same time quicker to change those decisions. (int 07)"

"One would be differences towards commitment. Time and quality level, for example. Perhaps Japanese people tend to pursue over quality, and spending too much time on something, instead of getting something done more quickly. For me, especially at the beginning, when someone says it will be done by x day, I would expect that the product would be completely fine and done by that day. Then I feel pretty bad if that is not the case. (Int 09)"

"What I've heard from other managers, and other people working with some people in other cultures, and without stereotyping, is that often in the Indian culture they need to

have more structured instructions, and it's not about out of the box thinking, it's more about doing exactly what they've been told to do. So being more explicit with that culture, on the specific expectations and the specific set of requirements helps them achieve what they're going to do. While for another culture that might be considered too restrictive and problematic, like in the US, you'd be thinking this doesn't allow me to expand out my thinking and be all I can be. (Int 01)"

Understanding that certain cultures have certain expectations, and certain traits do not work well with particular groups, while others do, is clearly a success factor within GVTs. One participant commented how they would feel if they were assigned a North American leader, considering their team is almost completely African:

"I don't think it would work fully. Maybe we would still get the work done, but the approach is very different for us, from western people to African people. We are more like Indians, working in groups and on relationships. The way we deal here is the African way, I cannot be something else. I can't be an "American leader". (Int 05)"

Having this understanding upfront can **reduce the amount of misunderstanding** within the team, and by consequence improve relationships. Each cultural group has its own ways of working and living, and how they focus on building relationships, for instance:

"When I travel, and each time there is someone traveling, from my country to another one where a team member of mine is seated, I send chocolates to them. Madagascar chocolates are very famous around the World. It's in the Madagascar culture to send a 'voandalana', which basically means a gift, and I apply that to my team. (Int 05)"

In some parts of the world, for example, **holidays and vacation time are extremely important**. This is very visible on how the Chinese take time off for the Chinese New Year, or the Nordic countries plan their vacation during the summer months of July and August.

"Also with working with Indian team members, it is important to consider they have a few holidays that are longer during certain periods of the year, therefore it has to be considered so that the project timeline does not get affected by everyone being out of office. And it varies by region, therefore it is important to pay attention to where team members are. (Int 02)"

As mentioned already under the theme of communication, language differences caused by various cultural backgrounds can pose a challenge even for experienced professionals. The following comments were specific to the Indian culture, even though it is important to highlight that stereotypes are only meant to help with an initial profile of a group, and should be considered carefully as they do not always apply:

"People tend to say yes on the phone, meaning that yes I will do that and then nothing happens. And that's very strange for us Finnish people because we have got used to that if somebody says yes it means that they will really do that. So that's one thing that we have to be very clear when somebody promises something. (Int 02)"

"They also try not to say no, and will say yes to everything that is asked of them, but I needed to be careful finding out how long exactly it will take, or what it is the real difficulty level for that task. (Int 09)"

Additionally, in regard to other cultures:

"For example, in Brazil it is very common to instead of just saying hi and starting to ask a question, it is very common to say 'well how are you', then you wait for them to respond, and then you ask a question. And you don't have that in some other countries, you can go right into asking your question without waiting for that response. (Int 08)"

"I guess I am kind of an exception, but Japanese people will tend to be quiet and try to read between the lines in the atmosphere. Also not confronting too strongly, and would assume others can also read our minds. (Int 09)"

"Maybe a quick story. There was a guy from Argentina that I had a discussion with. And basically, he was just complaining 'I find it really impolite and rude, that if I start a

conversation on our instant messaging with somebody, they don't even ask me how are you'. So I tried to explain to him why, 'well it's a cultural thing not everybody will ask you how are you at the beginning of a conversation because that's not the same thing in each country. I mean, it's not that they want to be rude to you, it's just they're just not used to that, or it means something different in that country, and they use it in different situations'. I believe If you want to be successful working in virtual teams, or are at least not depressed and discouraged, people must keep open minds and learn more about different cultures. (Int 06)"

It is then no surprise that the most common words within this theme were “different people.” Ask, learn, expect, understand and have an open mind about diversity can take you a long way, culturally speaking. It boils down to having a healthy level of respect towards others:

"Beyond that, I think there needs to be an underlying respect for diversity, because, fundamentally when you start to work with virtual teams, an important part of that is diversity. You have people from all walks of life, different age groups, different experience levels, they also think differently, so I think there is a need to respect everyone's background. Without that, virtual teams will fail, if they do not respect each other. And being the leader, you need to help the rest of the team to respect each other. (Int 07)"



Figure 12. Word cloud for the culture theme

4.5 Challenges of GVTs

In addition to some of the already mentioned challenges, such as **language** and being **physically distant** from others, an extra set has been collected through the interviews and were explored in this chapter. These challenges were the most recurrent during the discussions and deserve special attention by those working with GVTs so that the risks they pose can be **mitigated** as early as possible.

One of the most commonly mentioned issues was **time zones**. By design, Global Virtual Teams contain members sitting in countries across the globe, and sometimes the distance between them is so great that there are **no overlapping hours** within the original countries' business hours, therefore creating an obstacle:

"For example, one of my peer managers in Australia, when we only have a few hours overlapping per day. That really means that her time is constricted, because she's having to do all her meetings with US folks, within just a couple of hours a day, during the week. (Int 01)"

“The big challenge for our forums, for example, is time zones. We usually have to do it at 7 am Brazil time, which is usually still acceptable in Asia Pacific, where it is not too late yet. Though, that generates an issue for time zones earlier than Brazil, such as Mexico or western US. (Int 10)”

“The biggest challenge all the time, especially with Asia and say Eastern Europe is when you reach that 12-hour time gap. It’s probably the least effective, because even when leaving discussion items in tools like Slack or emails, there’s usually at least a 24-hour lag time, between getting direct communication unless folks are willing to work it very odd hours which can be straining socially, from a work-life balance perspective. (Int 03)”

And while GVTs have been made possible by advances in technology, some countries are still much more advanced than others. This situation creates an expectations gap if members from countries with **varying levels of infrastructure** try to collaborate in real-time:

“Also language comprehension issues because of technical infrastructure. My primary project manager speaks really excellent English, but from her home and home phone, it’s like she’s in an echo chamber and I swear I cannot understand her. That’s a big issue. That can happen to anyone, if the infrastructure is not fantastic, then you have some noise and difficulties. (Int 01)”

“In terms of technology, Kenya is still in the stone age. Most tools, like the video conferencing ones, do not run really well for us. (Int 04)”

“As the networks are bad across Africa, and sometimes it is not possible to load our conferencing tools, then in such cases, we use Whatsapp which is faster, as long as there is no confidential information. Calling over the phone is too difficult for us, as first there are the calling costs and second, the lines are very bad. If I try to call Sierra Leone or Angola, I can’t really hear those guys. For example, with Sierra Leone, I can’t even call in the morning, only in the afternoon, as the lines are all busy. (Int 05)”

The adoption of GVTs across industries has been **seen as a way to reduce costs**, such as stopping travels, and that is cited by some participants as a challenge. Without

being able to travel, team members never get to meet face-to-face, and developing trust and relationships become more difficult, taking longer for teams to be more efficient and start performing, therefore possibly reducing the savings from travel restrictions:

“It used to be a lot more common than it is now. Back in my previous job, when I was a Canada second line manager, we were able to go out every quarter and would go and visit the sites that we had people in. But with the expense posture as tight as it is nowadays, it is less common. (Int 08)”

“A great challenge that we have, is that you have to spend a lot of energy to explain small day-to-day problems. There is a high level of detail needed when going through issues virtually, and people end up spending a lot of time to explain things to others that are not there, while it is usually much easier and faster than you are physically collocated. (Int 10)”

External forces to the project team environment, such as **governmental barriers** and bureaucracies are another dimension to be considered. They pose an extra challenge:

“The biggest thing that I fear in the future is government regulation starting to try to crack down on some of this stuff and making it harder for companies to utilize global workforces. That would be the main thing that I see in the future which could become a challenge. If a country starts to realize how much money is coming in and out of their borders, they're gonna want a piece of it. (Int 03)”

Some other challenges were mentioned by participants that did not fit in the previous main categories, however, they are still important and should be listed. For instance, those working with **Agile** methodologies are always encouraged to be on-site with their peers to collaborate together, and that does not seem to be easy to adapt virtually:

“It is very tricky virtually as the whole idea is for the ideas to be visual for everyone in the team. You can use tools such as Mural, but it doesn’t work very properly and have that feeling of progress you have when it is done face-to-face. It would be nice to learn more about how to make virtual teams agile, as it is certainly something tricky as we are moving into that way of working. (Int 05)”

Another example is how human **resources are shared** amongst several project teams. As mentioned in the following example:

“The problem with this is that once you hang up the phone, you’re not 100 percent sure that the person will continue working on your project. You have their attention for 1 hour, while if you were sitting together, it might have been faster to complete the project, as the technical team has to prioritize the work they have to do, being in multiple projects at the same time. (Int 04)”

And leadership, or more specifically, **micromanagement** is a challenge. There is no room for this practice within GVTs, and repeated attempts at doing so can harm the trust of any given team:

“But also, leadership skills are critical. They can be undervalued. I see people who are not strong leaders. And they're almost like project managers, trying to be too much hands-on, micromanaging, and miss the part of working in an organization and being a leader, influencing others, whether you’re a manager or not. There are people who miss the point of working with people and it makes a huge difference in how things come together when people work towards a successful outcome. When it's not going right, I see it’s because people are far more into project management mode than on leadership mode. (Int 01)”

Finally, the word cloud for challenges is clear on how time zones and communication are a difficulty faced by members of GVTs, and need to be carefully paid attention to. What follows are the advantages and benefits perceived by members of GVTs of working with such teams.



Figure 13. Word cloud for the challenges theme

4.6 Advantages of GVTs

As it was discussed in previous chapters, not only several skills are needed to work in GVTs, but also its basic design presents complex challenges that do not allow for many painless workarounds, such as with time zones. It is common to focus on challenges and downsides, especially when an organization is moving from collocated and domestic to global and virtual teams. There are, however, **key benefits** that must be considered by every organization when this discussion topic is on the table. Turning now to one of the most interesting findings of this study which is the highest ranking topic under the theme of benefits: **access to special talent**. This is a benefit that can only be easily achieved through GVTs:

"I would say the biggest benefit in my mind is your talent pool has just increased exponentially. You can pick the best and brightest from the entire world, instead of just your state, county or just your area. You can pick the best and brightest from everywhere. (Int 03)"

Another example of this same topic is when certain projects require a network of **local knowledge and expert skills**, such as accounting or law, however, those countries lack the technological expertise that is then found in countries across the globe, far from that same region. For instance, the finance team in Africa is made of a network of country-specific finance specialists, and the technical support they get for tools and dashboards to be developed, come from Eastern Europe:

“The good side of it is that we have different people with different expertise. If the people in the country know what’s going on, what are the local laws and bureaucracies, then when you match that with the other global experts. It helps IBM to get the work done right. Knowing the local specifics is basically mandatory for our finance area. (Int 05)”

Moreover, for customer-oriented services, or technical support services, it is possible to offer such **support in the local language** of different countries, as it is possible to staff a number of employees in each different country that possess the required language skills. And when a global strategy comes from a central office, such as US headquarters, **local resources** are the most suitable for adjusting and adapting the strategy to the needs of each market:

“A very straightforward thing is language, so they could say that for example, the tool would need proper translation and localization. That means, user experience of a product, the design of a product, should work. And as a global team, how do you get the local market to use something that was not built specifically for them? Having someone from that place can demand things from your solution, and will have the better answers on how to address such particularities. (Int 07)”

Reversely, teams formed mostly of local resources that particularly difficult to find skill can utilize a global resource, and even share costs between multiple organizations. This can be particularly useful when using unique industry experts, for example:

“Another interesting thing is that I can have a very good expert in investments which normally would be very expensive and busy traveling, but through remote and virtual work, she is a lot cheaper, due to the costs being split by different centers. Along with that, she ends up being a bridge between the teams, bringing and taking information around the different meetings. (Int 10)”

And this specific benefit is especially vital for places in the world where certain local professional skills are limited. An example is the remote islands of Hawaii:

“If I had to stay local with my company, it would never exist. There is not enough talent in my area, I would simply not be able to start. It is absolutely vital to our company that we have global resources and global talent. (Int 03)”

The second highest ranking code under this theme is perceived as a direct inheritance from **multiculturalism and varied ways of thinking**. Participants believe that by having people with different ways of thinking can be more beneficial than a homogenous team, especially when it comes to innovating and bringing new ideas to the table:

“When we go through and form GVTs, I think it can be very valuable to an organization, particularly to a global organization, to pick different countries and cultures. Having people with diversified backgrounds can be very helpful, as well as with them sharing their experiences. (Int 08)”

“The multicultural influences can actually make the team much stronger and bring in new ideas that were potentially not there in a more pasteurized, for lack of a better word, environment where everyone has kind of the same background, so you don’t have that outside perspective. I would communicate that, making everyone feel they are part of the team and acknowledge the differences as part of the positives. (Int 03)”

“The cultural differences create a set of different opinions and solutions, which a monocultural team wouldn’t think about, and I think that adds value. (Int 09)”

“Another one is having different cultural perspectives, having people bring different ideas and approaches to the table. (Int 01)”

“I think the value of having people in different cultures and locations, is that they bring insight and considerations that could differ. (Int 07)”

It is a commonly known benefit that GVTs provide the opportunity to organizations to **save costs**. It is possible to hire less expensive resources in cheaper regions of the world, save costs with infrastructure through cheaper building rentals and the heavily decreased amount of business trips teams go through:

“Financial benefits for sure, it has always been a big driver for IBM to move into so many locations. It is cost effective. (Int 01)”

Contrary to the common belief, however, one of the participants suggest that these cost savings may not necessarily be always true. As with anything, it is important to **carefully analyze** what seems to be a benefit, as it can turn out to be a source of problems in the long run:

“I would rather frankly rather pay a little more and work with folks that I work more effectively with because I don't think that the cost savings are worth the churn on overhead costs. When you look at the end of the day if I have to go to a Chinese developer 5 times or to a Brazilian developer once or twice it's really not as cost-effective as it may seem. (Int 03)”

Still, on the benefit side of things, this notion of not having fixed offices or more flexible working environments, bring additional **work-life balance** to participants of GVTs, as normally they will choose when and where to work, based on their priorities and personal needs. That is a clear advantage to more strictly collocated and physical teams:

“By allowing folks freedom, allowing folks to work at home or work wherever they want, whenever they want, whatever hours they want, as long as they get their work done and we're on the same page, it creates incredible life-work balance, which will draw talent that would otherwise be much harder to get. (Int 03)”

Including complex situations in more patriarchal cultures where women are still quite attached to their families and taking care of their children:

“As long as the work gets done, we have quite a flexible working style so that we can support our families, especially because our team is mostly made of women that need to attend to their children. (Int 05)”

When presenting challenges in the previous chapter, issues of **time zones and local holidays** were brought up and to be considered carefully when planning and working with GVTs. From such challenges, however, there are also positive **benefits** that can be leveraged and turned into strengths of a team:

“Also having a more diverse work population, for example for my team, means we can provide support when one country has a holiday and another country doesn't. By being more globally diverse, we have the ability to provide better coverage. (Int 01)”

“For that team, we tried to use their holidays as an advantage, as the Chinese New Year calendar is quite different, happening in February. And I would work with them to have a backup team, so they could be out during that time, and when we needed to be out, they would be supporting us. As a team, we can backup each other. (Int 09)”

Specifically, to dealing with time zones, one participant suggested that teaming up people that are in **closer time zones helps to close the gap** elicited under the theme of challenges. By design, global team members are expected to be located in time zones that are far from each other, however, if planned carefully, the level of this challenge can be reduced:

“I can see GVTs being very effective. And the biggest trick that they've learned very early on was it needs to be people with roughly the same time zone working together, such as North and Latin America working together in the same time frame, and these teams have been very successful. (Int 01)”

Regardless of which skills, challenges or benefits GVTs can bring, some respondents believe that **technology will continues to evolve**. With it virtual and cultural barriers

will become ever less relevant and the march towards more and **more global, multicultural and virtual collaboration will only get stronger:**

“ I think as technology matures, depending on the industry certainly, if you don't physically have to be located with your team, then it's an advantage. And I just see in the future that this is gonna become more prevalent, certainly in the technology industry, or even in medicine where doctors can share knowledge. If it is not a factory job or something where you physically have to be there, I think it's just going to become more and more advantageous, lucrative and also more positive to the employee. (Int 03)”

“It is a very interesting topic of GVTs, I think that fundamentally there is no consistent answer that will work for different GVTs. I think the answers evolve with time, just as how people are moving from country to country, as cultures are merging into a melting pot. For example, this whole notion of sexual orientation, whether you're a female, male, LGBT, whatsoever, none of this really matters anymore in the future. Solutions of management of GVTs are continuously evolving, as technology is continuously evolving too. The diversity factors will be less of a problem over time in the future, as cultures seem to be more open and accepting of different walks of life, languages, etc. It will continuously evolve. (Int 07)”

To summarize the benefits from GVTs, a word cloud was created. According to the most recurring words, this theme is all about different people, from different cultures, having a global and local mindset and access to best talent and support.

the participants of the interviews were quoted and coded according to a limited number of dimensions.

A triangulation strategy was adopted (Denzin 1970), which means data collected through the interviews are further supported by literature review, IBM internal documentation and years of personal observation, seeking to cancel out biased comments and interpretation. Through linking the real context with reviewed literature (presented in chapter two), the author formed a strong linkage between theory and practice (presented in chapter 5.3). Similarly, by interviewing team members of various organizations, the author sought to amplify the validity of these findings, as within IBM distant organizations may function very differently from one another, resembling different companies altogether. While Saunders et al. (2009, 158) challenge case studies to be difficult to be generalized, Yin (2013, 36) argues that it is possible to generalize results of a qualitative and case study research to broader settings, and that once results have been replicated in a new research, validity can be extended even further than a quantitative research would be. The author, however, does not claim for the results of this study to be a single source of truth, and new studies need to be carried out for further verification. As each interviewee belonged to varying teams within IBM, led by different managers, directors, and executives, it strengthens the findings and reproducibility of results to other multinational companies that can take advantage of similar technological benefits, such as internet-mediated communication and distributed teams.

Even though this research has a unique aspect to it, mainly in regard to how the author conducted interviews and analyzed the results, additional gaps still need to be examined, and are further described as part of the discussion chapter. Other teams within IBM and other companies that desire to verify this same phenomenon, can take the suggested approach in this research and replicate it (Brink 1993), which should lead to comparable findings, as long as the structure is kept similar.

Lastly, as the author has lived and breathed within GVTs for the past 11 years, it may bring bias to the analysis and interpretation of the collected data (Saunders 2009, 156). To mitigate and decrease the risk of being too strongly biased, besides the use of triangulation, the author regularly sought feedback from 3 different mentors during the entire process, from both IBM and JAMK.

5 Discussion

The purpose of this research was to explore what the different dynamics Global Virtual Teams experience in relationship to four key constructs: leadership, trust, communication, and culture, which were selected based on the researcher's experience and exposure to this environment. Going further, the research also allowed to explore what the interviewees believe to be challenges and opportunities generated by the dynamics of these constructs within the global virtual environment of their teams. Drawing knowledge from experienced professionals was fundamental to the development of this research body, and provides key input into how businesses can adjust to leverage the benefits of GVTs in their operations.

Being an enthusiast of technology, virtuality, and multiculturalism, the author carried out this study to deepen his understanding and bring a richer set of data that can be further leveraged by companies and academics. The primary question behind this research was:

“What are the dynamics of leadership, trust, communication, and culture in Global Virtual Teams?”

And along with it, two sub-questions were considered to extract more information on challenges and opportunities:

- **“How can GVTs overcome the challenges of multicultural diversity and team virtuality?”**

- “How can GVTs leverage the strengths of multicultural diversity and team virtuality?”

A qualitative research was carried out based on the case study model (Yin 2013), as the author was an employee of the case company, IBM, and while a case study only covers the perspective of a single corporation, the data collection was designed to interview participants from different IBM organizations around the globe, further expanding the replicability of findings to other external organizations. Ten semi-structured interviews were carried out, recorded in audio, transcribed and coded in NVivo using content and thematic analysis. The final product was a set of 50 codes and four themes for leadership, trust, communication, and culture, along with two extra themes and 15 codes for challenges and benefits.

5.1 Answers to the research questions

The nature of the four constructs of leadership, trust, communication, and culture being put together within virtual environments where team members do not get to see each other most of the time is very complex. For that, this research sought to identify what are the most common dynamics faced by 10 IBM employees from 8 different countries, distinct organizational roles and an average of 9.9 years of GVT experience. Results were clustered within themes, as to more systematically analyze each set of codes (as seen in Tables 2 and 3), and presented as part of the results chapter along with supporting quotes from the participants.

Participants believe that strong **leadership** is an essential trait when it comes to working in GVTs. And as leaders, it is critical to **empower** and hold people **accountable** for their work, shifting the center of command to the people, while **listening empathically** to people’s needs. Furthermore, a **coaching** style of leadership is preferred, which goes in line with empowerment mentioned previously,

and the “triple c” of **change, conflict, and crisis management** are important supporting skills.

The idea of **trust** came up in most interviews even before the author had to ask anything about it, which shows how important it is to the well-functioning of these teams. Developing trust virtually can be more difficult than in person, and even though most participants suggested that project leaders should consider getting team members together for a few days for **face-to-face relationship building**, it is not always possible, or at least, not immediately plausible to do so. In such cases, focusing on developing relationships over audio or video conferences is equally relevant.

Communication is the engine of teams, be them virtual or not, and the key findings in this research is that **frequency** of communication has a strong impact on how GVTs operate. The more **frequent, clear and transparent** you are, can also impact in how trust is further developed, decreasing the need for managing crises, for example. As virtual communication relies on technology, participants discussed which **tools** they commonly use, but most importantly they highlighted how **language barriers** are a continuous challenge.

If communication is the engine, **culture** is the spirit of GVTs. This very complex construct holds several different specifics on its own alone, even if one single culture is considered, let alone an environment where cultures from any and every part of the globe can be mixed and matched. Interestingly, participants focused much more on **benefits** and opportunities brought by multiculturalism, highlighting how tolerance is increasing as years go by. Participants see **cultural awareness** as fundamental to working in GVTs, as it influences how one leads, develops trust and relationships, and communicates interculturally.

By design, Global Virtual Teams are made of people sitting in various locations across the globe, and that brings the **challenge of time zones**, which was the number one challenge mentioned by participants, followed by **infrastructure** and **understanding communication**, due to language barriers. On the benefits side, having no geographical boundaries, GVTs can **access talent** anywhere in the globe, whenever desired. Additionally, the plurality of experiences and background of the team members are essential ingredients to **developing ideas that are not common** in more homogenous teams.

5.2 Practical application and managerial implications

The findings of this research can be utilized by both new and existing teams that are either or both global and virtual. Each different finding presented in the longer results chapter should be analyzed carefully and considered as some might be more applicable than others, based on the design of the various GVTs across the globe and industries. Regardless of the setup of the team, however, the four main themes of this research were found to be of high importance for both managers and team members, as it should be in every individual's interest to make these dynamics positive, leveraging opportunities and mitigating threats.

First and foremost, as seen in the dynamics of leadership chapter, a manager of a GVT cannot be a micromanager. From day one it will be key to learn to delegate, empowering team members to perform their work, however they believe it is the best way to do so. A leader is responsible for declaring a vision and setting clear goals for teams to achieve, and let the work get done by the professionals. As leadership does not come with a job title, it means that both managers and team members should proactively lead, at different times of the lifecycle of a project, whenever appropriate. Development of trust is one such area where both sides are responsible for infusing trust into the team environment, as that is the way to get teams working

together more comfortably. Managers, however, can influence in how budgets are negotiated and a key recommendation is to allow for team members to meet face to face, as frequently as possible, such as twice or, at least, once a year. More importantly even is for new teams to get together for a few days before officially starting a project, as the investment can pay off given that teams will be performing at higher levels given they trust each other. This effort will likely further develop ways of working and communicating that are more specific to the team's needs.

As being multicultural means having members from different countries and backgrounds, language is a challenge to be tackled. Many teams resort to English as the main language for business discussions, even if a majority of team members come from a same country and mother tongue. This practice furthers the inclusion of all team members, especially when a minority exists and can feel left out if a specific culture is dominant and not considerate of the others. Such a mistake can likely lead to a decrease in performance and trust from those team members, which could be easily avoided if attended to at first. Learning more about different cultures, especially to avoid stereotypes, is a recommendation to all involved stakeholders of any given GVT. It is important to keep an open mind and observe how people from various backgrounds behave and interact, and proactively and openly discuss these topics with the team, for a more exponential effect.

It is key for leaders to realize that success can be exponential if benefits are tapped into, and challenges are mitigated. As examples, if GVTs are mainly made of individual members sitting in countries across the globe, allowing them to have higher control of their work time leads to better work-life balance, which was mentioned as a reason to stay with a company in the interviews. And while time zones pose a challenge, they can also be turned into an opportunity, for example for providing support within certain regions only. A basic scenario is for a US-centric team to expand its capabilities to, for example, the Philippines, which in turn would

become the supporting arm for all countries in the Asia Pacific region, freeing US resources of the constraints of time. The same can be thought of for language barriers, as instead of it being solely a challenge, those teams with such obstacles will typically speak additional languages that can be used to provide regional support or training, for example.

On a more strategic level, GVTs that wish to leverage Agile practices in how they run their projects need to carefully plan and design ways of working, along with providing the appropriate tools which include computers and programs to workers. Attempting to have video conferences that are high quality, with team members that lack access to the adequate infrastructure can also have a more negative effect than a positive one. If planned carefully, however, Agile practices such as the application of the Scrum framework could be successful. In fact, not only teams operating under Agile methodologies require appropriate technology and infrastructure to properly function, but any team that relies more heavily on audio, and especially video conferencing, needs to consider infrastructure while planning the business approach. A recommendation for future research was made on the topic of Agile and GVTs, under chapter 5.5.

A final suggestion to companies and teams is to have tailored and current educational courses, where individuals can read, listen or watch, and learn from at their own pace. Such courses could contain roleplay videos depicting situations where GVTs are facing difficulties, and the learner is placed in a consulting position to help drive the team back on track and get existing issues fixed or eliminated altogether.

5.3 Assessment of the results in the light of the literature

Earlier literature about GVTs is not very extensive due to this phenomenon being relatively new to the business world, and therefore having only a small amount of academic research already completed. Due to this reason, the reviewed literature included authors from all over the globe and from different industries. When it comes to comparing the results of this research to the prior knowledge base, the first contribution that can be made is regarding the definition of GVTs. For instance, a few authors have stated that GVTs work independently and across boundaries of time, space, and organizational structures, having different ethnic, educational and functional backgrounds, often having no opportunity to ever meet face-to-face (Kirkman et al. 2002; Kotlarsky and Oshri 2005; Kankanhalli et al. 2006; Cusumano 2008; Reed and Knight 2010). While these points are valid, the latter is recommended against heavily by the participants of this study. Allowing GVT members to meet face-to-face from time to time helps to develop relationships and trust, therefore leading to better performing teams, as seen in Tuckman's (1965) earlier work.

GVTs are seen currently by many as the "new normal" (Derven 2016; Saarinen 2016), mainly due to advances in technology and infrastructure across the globe. However, as stated by Interviewees 04 and 05, especially in Africa, GVTs are still in their infancy, and a long way is still ahead on its maturity. Moreover, it is common belief that straight adoption of GVTs equals monetary savings on infrastructure and office costs (Schweitzer & Duxbury 2010), but it may increase costs if the efficiency of the new team is much lower than the previous set up, meaning a lot of re-work and possible go-to-market delays as mentioned by Interviewee 03.

Dragusha (2012) asserted that strong virtual leaders are essential pieces of GVTs and this statement was on point with all participants of this study. Moreover, coercive

and dictatorship styles of leadership are seen as destructive behaviors in GVTs (Switzer 2000), and also advised against by Interviewee 01, as it removes trust from teams instead of generating it; therefore the coaching style of leadership is suggested by the participants. Overall, if a strong leader is not around and allows the team to have contrasting perceptions and communication norms and preconceived prejudice, this could lead to lower performance and less cohesive teams (Jarvenpaa et al. 2004).

On a more theoretic level, Jarvenpaa, Knoll, and Leidner (1998) developed a model where trust is a product of team building, ability, benevolence, and integrity. While this model can be verified as true based on comments from the interviews, nobody specifically mentioned abilities as an important piece for developing trust within a team. Also, when it comes to how different cultures approach trust development, Mockaitis, Rose, and Zettinig (2012) mentioned how collective cultures could have higher chances of developing trust faster than individualistic ones. Based on this research, however, participants from both types of cultures, for example, the 3 Americans, the Finnish, the Brazilian, and the Kenyan, all commented very similarly that their approach towards trust is strong, and should be based on relationship building, which means the researchers' statement is not held valid.

Finally, the findings of this research strongly support the theoretical framework developed by the author during the literature review phase. A revised version of the framework is below based on the additional key dimensions that came out of the empirical research, depicted in a lighter outline color:

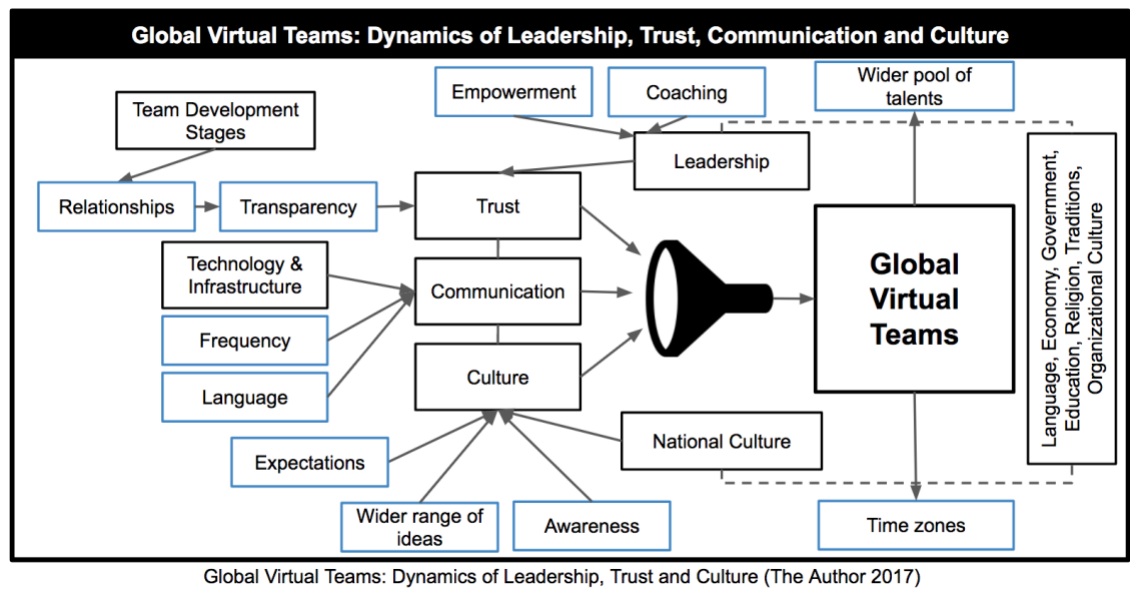


Figure 15. Revised theoretical framework after analysis of findings

5.4 Limitations of the research

By design, a qualitative research aims at exploring a particular issue on a deeper level (Gil 2008), and due to limited time and resources, only a very small fraction of the population could be interviewed, resulting in a total of 10 participants. Additionally, this research followed a case study approach (Yin 2013), having a single, American-based IT multinational company, limiting further the variance in results, due to additional dynamics such as organizational culture (Kotter 2012).

From the author's perspective, inherent bias may have also influenced in how questions were designed, asked and interpreted, even though the author sought to remain neutral throughout the research process. Had the author started a scientific process even earlier on, it could have been possible to bring additional scientific observational data to this study body, while it remained being mostly experience-based.

Lastly, by having the dynamics of the four constructs (leadership, trust, communication, and culture) being analyzed at the same time, the collection of the

data stayed at a more superficial level, compared to a research where a single construct would have been examined exclusively. This specific limitation has also impacted while coding interview responses under adequate themes as often more than one interpretation could be given.

5.5 Recommendations for future research

As GVTs are commonly a team of people running a project virtually, it would be interesting to analyze how Agile practices and frameworks such as Scrum are being leveraged by these teams. Additionally, a comparison study could be carried to analyze the differences between similar projects that are run virtually or physically collocated, in an Agile fashion. Going one step further, another flavor that could be added to such a study is the application of innovation techniques such as Design Thinking or TRIZ, all done virtually through technology-mediated communication tools.

GVTs will remain on the rise for years to come, and as mentioned throughout this study, have already become the new normal (Derven 2016; Saarinen 2016) to many countries and companies. As infrastructure further advances and matures in regions such as Africa, additional studies could be carried out from the perspective of these countries that are, at the time of this writing, still trying to catch up technologically with other parts of the world.

Variations of this same study, such as looking at the perspective of leaders or members only, and the removal or addition of constructs that could be influential to GVTs' dynamics, could also be used in additional studies. Replicating this research at IBM again, but taking participants from different countries, or applying a quantitative approach could also lead to further findings and validation of the results found herewith. Additionally, reproducing these research steps at a different company, or

companies, could be considered. Finally, an observational study that shows the application of the key dimensions highlighted in this research, and its efficiency and efficacy as a framework and a way to bootstrap new GVTs could be an interesting exercise benefiting both the academia and the empirical worlds.

"I would say that for, certain industries, particularly the industry that we're involved in, in the tech industry, I think that global virtual teams are the future. I believe that it is going to just continue to grow and adapt, as far as ways that we can communicate, the talents that are involved, the ability to knowledge share, even opening up into emerging markets, understanding the culture. The more global we are and the more we're able to have that reach, the more it's going to benefit the company, whichever company that may be, in the long run. (Int 03)"

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Appendices

Appendix 1.

Email message: Semi-structured interview questions guide

Semi-structured guiding interview questions: Email message

Hi! Thank you in advance for your time. To give you a bit of background, I am writing my thesis about Global Virtual Teams and what are the dynamics of communication, trust and culture around them.

I have a few questions to go through with you, and the main themes are below for your reference and preparation.

1. What is your experience with Global Virtual Teams?
 - a. Types of project, types of teams you had, the roles you played
2. How do you communicate with your peers and team members?
 - a. Ways of communication, tools, challenges, benefits
 - b. How do you support your peers and / or team members?
3. Are there techniques you apply to develop trust between you and your team members?
 - a. How about between the team members themselves?
4. What type of benefits do you get from GVTs?
 - a. Could you tell one short story?
 - b. How about challenges? Do you have ways of overcoming them?

I don't expect you to come with complete answers written down. This is mostly for us to carry out a conversation around these 4 main questions. Thanks!

Semi-structured guiding interview questions: Interview base script	
Discussion topic	Examples of questions
Opening and bonding	<p>Thanks in advance for your time. This interview will provide direct input and support to my thesis work on Global Virtual Teams, and the dynamics brought in by trust, communication and culture. The main purpose of the thesis is to understand these dynamics.</p> <p>* Are you ok with me recording this interview for later analysis? Neither the audio nor the transcription will be made available publicly.</p> <ol style="list-style-type: none"> 1. What is your current role? 2. How long have you been with IBM? 3. And how long have you been working with GVTs? 4. To gain some more context, please tell me about your educational and professional background
Working in GVTs	<p>Okay, now talking about working with GVTs a bit more...</p> <ol style="list-style-type: none"> 1. How do you keep in contact with what's going on with the team in general? <ol style="list-style-type: none"> a. How about project work and status? b. Do you and your team speak about anything else other than projects? 2. How many people work in your team with/for you? <ol style="list-style-type: none"> a. From which countries are they?

Leadership	<p>For leaders:</p> <ol style="list-style-type: none"> 1. How do you provide support to your employees? 2. What skills do you believe are needed to lead a virtual team? <ol style="list-style-type: none"> a. Which is the most important to you? Why? <p>For team members:</p> <ol style="list-style-type: none"> 1. What type of actions do you take to take leadership? 2. What skills do you believe are needed to work in a virtual team? <ol style="list-style-type: none"> a. Which is the most important to you? Why?
Trust	<ol style="list-style-type: none"> 1. How do you feel about trust in these virtual settings? 2. What are some ways to develop trust between individuals virtually? <ol style="list-style-type: none"> a. How do you influence trust building? b. How important do you think trust is for GVTs? Why? 3. How do you connect teams that partially co-located and partially virtual? <ol style="list-style-type: none"> a. Does this hybrid practice introduce benefits? How about challenges?
Communication	<ol style="list-style-type: none"> 1. What do you think of this type of communication (virtual)? 2. What do you see as challenges over face-to-face

	<p>communication?</p> <p>a. Do you have any ways of overcoming them?</p>
Culture	<p>1. You work with people from different cultural backgrounds within this virtual context. What are your thoughts about multicultural teams?</p> <p>a. What benefits are there to multicultural teams?</p> <p>i. Why do you think so?</p> <p>b. What challenges are there to multicultural teams?</p> <p>i. Why do you think so?</p> <p>ii. How do you overcome these challenges?</p>
Final questions	<p>1. What do you most enjoy about working with GVTs?</p> <p>2. What do you least enjoy?</p>
Recommendations	<p>1. Before we close, regarding the theme of our discussion, would you have any final thoughts or comments? What would you recommend to a person joining a GVT?</p>
Thanks and closing	<p>I deeply appreciate the time you spent with me today, and the help with the development of my master thesis. Once I finish it, planning for early spring 2018, I will make sure to share the results with you.</p>

